

hucj / 1916

March 19, 1916

Sunday.

Left San Diego at 1:30 for Yuma. On the way to the first night's camp ground - about six miles west of Jacumba - we noticed terrible washouts, many of which start near the top of a mountain taking the whole surface to bedrock - often sweeping before them huge oak trees and boulders twenty and thirty feet in diameter. Several mountains were noticed with eight or ten slides on their sides, some of the slides being half a mile wide.

March 20, 1916

Left camp at 6:30 and had an easy trip until reaching Imperial Valley, where - near El centro (sic) - it started to rain lightly. As the hood had been left at home, the engine soon short-circuited and we had to put into a shed for two hours, where I improvised a protector against the rain. We then went on to Holtville where we were told the roads over the desert were fine but, after about five miles running, we found some fool had left a trailer in the middle of the road, in deep sand, so we had to turn out, getting stuck. Had a fine time of it! After working about four hours with brush and sticks, we made a hundred yards and stuck again on a hill in deep sand. I unloaded the Ford but could not carry it much over a quarter of a mile, so we camped there for the night.

March 21, 1916

Started the first thing this morning for the nearest ranch house, about five miles back, and was very fortunate in picking up a good strong man who stayed with us until we reached Yuma. We gave the car two good shoves and were off. Stopped for a rest and good lunch at a well on the edge of the great sand

Huey

dunes, where I shot some Horned Larks. We started off again at 1 o'clock and, after a mile or so, real trouble began - the late windstorms had blown sand over the tracks ten feet deep in places. We unloaded and carried the stuff over the hummocks and started in low, taking some of the hummocks in good style and sticking on some of them. In one place we found the road undermined and had to build road with the loose boards down and up over a deep sand canyon - some work, too. After this we made camp for the night.

March 22, 1916

This morning we built about two hundred yards of brush road, having unloaded and packed for the third time. Had a great time getting over our improvised road but finally made it and ran without trouble to end of board road, when we again stuck in deep sand and unloaded. After this it was clear sailing. I took two more Horned Larks and near Yuma, in California, I took a long shot at a Leconte Thrasher but missed. Reached Yuma about 1 o'clock and had lunch at the S. P. restaurant. In late afternoon drove up to Potholes in search of camp site, seeing a Ground Dove on the way. We finally settled camp in a mesquite thicket near a large canal.

Birds collected today: Near Sand Dunes, Imperial County, California.

D 87	- Horned Lark	female	6.50	L.M.H.	March 21, 1916
D 88	- Horned Lark	male	7.30	Do.	Do.
D 89	- Horned Lark	female	6.50	"	"
D 90	- Horned Lark	male	7.00	"	"
D 91	- Horned Lark	female	6.50	"	"

Birds collected today: Fifteen miles west of Yuma, Imperial Co.

D 92 - Horned Lark	female	6.50	L.M.H.	March 22, 1916
D 93 - Horned Lark	male		Do.	Do.

March 23, 1916

Potholes. Skinned this morning and took helper to Yuma about noon, bought supplies, etc. On way back saw Ground Dove near road and shot three Quail on way back, near camp. There was a hard wind blowing and the sand was flying.

Birds collected today: Potholes, Imperial County, California.

D 94 - Gambel Partridge	female	10.50	L.M.H.	March 23, 1916
D 95 - Gambel Partridge	male	11.00	Do.	Do.
D 96 - Gambel Partridge	male	11.00	Do.	Do.

March 24, 1916

I skinned in the morning. Aunt May found Vireo and Gnatcatcher building near camp and in afternoon we both went down the valley, where I shot 2 Chipping Sparrows and a Towhee but found no nests. Set twelve mouse traps in the evening.

Birds collected today were: Potholes, Imperial County, California.

D 97 - Chipping Sparrow	female	5.25	L.M.H.
D 98 - Chipping Sparrow	female	5.00	Do.
D 99 - Abert Towhee	female	9.00	Do.

March 25, 1916

Potholes. Picked up mammal traps this morning but they contained nothing, although two were sprung. After breakfast, got in machine and ran up a desert wash about five miles off where Aunt May found Verdins with one egg and a Dove with two and I found a Crissal's Thrasher with two fresh eggs, all of which were left. Shot several birds - two Night Hawks and some Hummers. In the evening went down canyon about two miles after game for food. Shot several Doves and saw Dove of the year on the wing in the eveing. After sundown on the way to camp heard several Poorwills, also saw several and shot one.

Birds collected today were:

D 100 - Black-chinned Hummer	male	3.50	L.M.H.
D 101 - Black-chinned Hummer	male	3.50	"
D 102 - Black-chinned Hummer	male	3.50	"
D 103 - Poorwill	female	7.00	"
D 104 - Night Hawk Texan	female	9.00	"
D 105 - Western Warbling Vireo	male	5.50	L.M.H.

March 26, 1916

I stayed at camp to skin while Aunt May went down to the Colorado River. She saw a Vermillion Flycatcher and took a Verdin's set of four eggs. In the evening we both went down the valley to look for Poorwills, of which we saw three of four but failed to collect them. Set out a dozen or more traps.

Eggs collected today were:

D 1 - Auriparus f. flaviceps - A. O. U. 746

Verdin



3/26/16 - Inc. fresh -

Coll. by H. Canfield

Nest in mesquite four feet up.

March 27, 1916

While on the way to pick up traps, Aunt May shot two Ground Doves at one shot. They were feeding in the road. Picked up traps which contained three pocket rats, and shot two song sparrows. When cleaning some quail shot yesterday, I found one had a crop full of alfalfa seed and some blue blossoms. The Gnatcatcher at camp is very friendly and still building. It comes right into camp for cotton. In the evening went Poorwill shooting, killing one and knocking down another but it fell in the thick alfalfa over which I was shooting and was lost. Set out about twenty traps. It has been extremely hot the last two days - almost 110 in shade.

Birds collected today were;

D 106	- Ground Dove	male	7.75	L.M.H.
D 107	- Ground Dove	male	7.75	Do.
D 108	- Song Sparrow	male	6.00	"
D 109	- Song Sparrow	female	6.00	"
D 110	- Poorwill	male	8.00	"

Mammals collected today were:

D 45 -

Rat - Male

3/27/16 - Coll. by L. Huey

10.25 -6.10 -1.55 - .45

D 46 --

Rat -- Sex (?)

3/27/16 -- Coll. by L. Huey

10.00 -- 6.00 -- 1.50 -- .40

D 47 --

Rat -- Female

3/27/16 -- Coll. by L. Huey

10.15 -- 6.05 -- 1.50 -- .47

March 28, 1916

Picked up my traps this morning and found they held three pocket mice. Shot a Cowbird -- male -- and saw four more. Also got another Song Sparrow. I then moved camp about a hundred yards into a screened porch away from flies and sun -- some blessing, too, as I don't believe I could stand heat and flies much longer. Went into Yuma about noon for bread, etc., etc., and on the way home shot a Vermillion Flycatcher, Ground Dove and a Rabbit. Found a place where there were about a dozen Cowbirds near pigsty. In the evening went after Poorwills again, knocked one down but couldn't find it. Set out about 20 traps.

## Birds collected today:

D 111 -- Dwarf Cowbird	male	6.80	L.M.H.
D 112 -- Song Sparrow	male	6.25	"
D 113 -- Vermillion Flycatcher	male	5.80	"
D 114 -- Ground Dove	male	8.00	"

Mammals collected today were:

D 48

Mouse - male - 3/28/16

Coll. by L. Huey

7.75 - 4.25 - .90 - .25

D 50

*Sylvilagus auduboni arizonae*

Rabbit - male - 3/28/16

14.30 - 1.60 - 3.25 - 3.25

Coll. by L. Huey of D. R. D.

March 29, 1916

Picked up my traps this mornig and found they contained six pocket rats and one pocket mouse so came back to camp early and went to skinning. Aunt May went out about 7:30 and came back at 1:00.

Huey/Potholes 1916

(Laurence M. Huey:)

Potholes Vis and Bard  
Imperial County, California  
November 23 - Jan 3  
1916

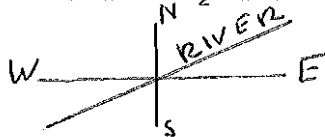
Summary  
of  
Trip

Outline of general topography,  
vegetation and some habits of  
birds conspicuous about camp.

(The strike-outs are Mr. Huey's)

Vis Bard near Laguna Dam Nov 23 - Jan 1.

Reclaimed valley of Colorado River that was probably at by gone ages sea bottom but now filled to the elevation of 135 f with sediment (place of observation was from river west 2 miles to southwest  $\frac{1}{2}$  mile



to North about  $\frac{1}{2}$  mile. The main canal runs west on the north side of the valley bordered to the west which rises to low and barren hills of sun scorched lava - in the washes are found the various desert shrubbery (mesquite salt bush creosote) and numerous other shrubs.

In the valley proper I found huge cotton woods ~~tree~~, willows and very dense thickets of Arrow weed decorating the various lagoons and on the higher more desert places were found amid the more sparsely grown arrow weed, mesquite trees of a supported large clusters of parasitic mistletoe. The latter proved to be the source of maintenance for various migrants and several treet near camp were jealously and garolously (sic) guarded by a pair of mocking Birds.

The phainopeplas were always a source of trouble for the mockers but really I had very little sympathy for them, as a single bird, wanting to get a few berries would alight on the tree top and tell the whole world he was there by a series of plaintive chirps.

It was amusing to watch the tactics used by the mockers in defending their stores. One bird would stay in the thickest part of the tree, while the other would chase the intruders away & both scolding as hard as they could.

The Robins and Sage thrushes were both good berry eaters but the latter seemed the most crafty of the 3, always coming in from under the tree & making no noise in that way generally fared fairly well without being driven off.

The mockers were bold tho & no matter how badly outnumbered they usually held their stores.

The weather ---- we all comment on it either for or against, that depends on our circumstance with me up until Dec ?? I wouldn't complain but from then on it either blew, rained or froze and wasn't particular about just when to proceed but I never had more than one of the disagreeable elements to happen the same day, a blow usually lasted three days and during this period I was never sure that my tent

would withstand the trial as it seemed to come in gusts, bringing sand and tumble weeds which were torn out by the roots.

These wind storms, which came spasmodically, had great bearing on the migrants after some winds I found birds abundant and other times entirely wanting, even the few residents had sought other shelter.

The rain and temperature seemed to have no bearing on the birds tho the normal rainfall here is about 2 inches a year and may come in summer or winter.

The temperature depends largely on the snowfall in the high ranges bordering the desert and a day of 75 or 85 may fall to 25 or 30 during night. During my stay I saw skim ice completely covering a pond 40 feet wide and towards the last of Dec was an ever ongoing occurrence to have ice on waterbucket.

Shortly after my arrival the migrants began to muster in first - in small bands and increasing until the middle of Dec. different species went here and there in waves.

The resident birds seemed to follow food and about a week after my arrival a Black Pheobe ~~w-b1e~~ made his headquarters in a nearby pasture & gradually became tamer until it would dart under the awning of my tent after flies and on very cold mornings would hop around on the ground under the awning picking up the frozen insects.

Later on ~~a-pair~~ 2 Audubon warblers decided on gleaning a daily meal from my camp and were constantly after the few crumbs of cornmeal mush that were left in the corners of my dogs dish.

And here is, where the Pheobe followed pace with the mockers, while it didn't eat<sup>h</sup> the scraps, it probably thought the pan a good attraction, for flies cherished it accordingly flying at the warblers viciously snapping its beak.

One thing that seemed strange was the lack of cowbirds about the pastures for in the spring they were about in thousands. The day of my arrival in Yuma I noticed several large flocks in the city keeping company with the English Sparrows, while not mixing with the sparrow they sat around in the trees in ~~elzable~~ flocks making a constant noise reminding you of the sparrows.

{	Place	{	Topography	{	speak some of Bird life, preferably a certain square feeding to make it flow easily
	Date		Climate		
{	migrants	{	date of arrival	{	any unusual habits observed
	residents		Song		
	Food				

General Equipment necessary for 4-6 weeks on small and medium birds and animals

200 12 gauge shells air 7¢ 8¢ 50 10¢  
 25 dust 25 4¢ 25 6¢ a couple of Buckshot  
 500 loaded auxshells & material to reload in emergency  
 50 mouse traps 10 Rat traps  
 4 - 1½ Jump traps for Hawks and owls on poles  
 3 no 2 3 1½ & 2 1  
 1 Roll abs. Cotton & 1-5 lb Bale  
 500 labels coil wire no 20  
 2 spools each 22 & 24  
 About \$50 cash is necessary & spent very Judiscously

Vicinity Ft. Yuma, Calif near Potholes - Nov 23 --

Got camp set up after arrival on 1.10 train  
 went out after birds - getting 4, saw several Phainopepla but very wild

Set traps in sandy ravine running up into rocky hills

650 Mocking bird  
 1 Verdin  
 2 "

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3 "  
 4 Shrike  
 5 Sage Sparrows  
 6 " "  
 7 Bluebird  
 8 Ash Throat Flycatcher  
 9 Savannah Sp  
 660 "  
 1  
 2  
 3  
 4

Nov 24 .

While skinning a robin flew across tent acting in crippled manner. I walked out & to my surprise picked it up - was wounded probably by hawk.

Set steel trap in desert wash & a line in arrow weed near camp.

Nov 24 -- picked up traps which had 3 dipodomys shot several birds & saw numbers of Barn Swallows

Nov 25 picked up traps which had 3 peromyscus dipodomys - went over and looked at steel trap - Fox had been near during night

I then hiked out on desert but saw little - cactus wren and mocking bird - 2 sage sparrows that were extremely shy - gamble sparrows in small flocks apparently just arriving - shot Phainopepla, set traps near camp -

Nov 26 - picked up traps which held 2 perognathus, 1 hamster m, 1 perognathus - shot few birds, set traps in same place and 8 traps in cotton rat colony -

Nov 26 - when going back over small bridge near camp, heard a splash underneath & out flew a merganser which I shot. It proved to be a hooded.

Nov 27 - traps contained nothing - got 1 cotton rat, shot some birds and in evening saw Horned Owl out of tree tops heard him calling night before

Nov 28 - shot few birds and noted several savannah Sparrows near alfalfa fields. Shot 1, went up to Potholes after grub & mail made friends with 2 young fellows who have seen darters along river - flock of white pelicans fishing below dam - set traps in creek bottom.

Nov 28 - while setting traps in desert wash saw a poorwillie flying in late morning which I shot.

Nov 28, traps empty so back to work on other sites, birds - set 15 traps in cotton Rat colony & rest in desert wash also rebaited steel set & made 1 more

Nov 29 - saw 1st mourning dove - in alfalfa patch

Nov 29 awoken early by Son of Bitch cat stealing my skins - it took my only cotton rat & 2 peromyscus God dam - just at day light heard Horned owl hooting close so stepped out & took 2 shots at it but didn't kill - had 1 cotton rat, 1 Harvest mouse in cotton rat traps also 1 gopher - the latest set steel trap held a kit fox other untouched as were the line of traps in desert wash - out after few birds saw flock of about 50 Mt. Bluebirds got 5 also saw few Chipping & Vesper Sparrows. Meadow larks seen in alfalfa fields.

Nov 30 - had 2 cotton rats in traps also 1 Harvest and 1 peromyscus- went up to go and visit with boys at Gov. office



at Potholes but they didn't raise gates so couldn't cross the dam. I then hiked up to the big desert wash 6 miles north shot several song sparrows in river bottom 1 yellow throat and 1 tule wren. Heard raven and more of the latter in 5 miles of desert wash, saw only few Gambel quail 1 cactus wren and 1 shrike - cat came back during night & got caught in trap set but pulled out -

Dec 1 Nothing in traps shot 1 sage sparrow & back to wash on accumulated stuff.

While skinning a Verm. Flycatcher sat on a mesquite near by and got shot - also few (Ruby c -) about this a.m.

In evening went out to set traps and was surprised to find cotton rat in one of the traps.

Dec 2 - Had 2 cotton Rats this a.m. & several Harvest mice - shot few birds - saw some Cliff swallows & a Buzzard this a.m.

Set traps in rocky canyon and 4 new steel traps -

Dec 3 - No cotton Rats - but had 3 more Stephens canyon mice. Saw and shot my first Crissal Thrasher. Further trips shot seven ~~of~~ birds - Rock wrens - Cactus wrens and was unpleasantly surprised to find all my previous Gnatcatchers to be west of Dam.

Set in new cotton Rat colony and a few traps in arrow weed thickets

Dec 4 - traps had 1 cotton Rat & 1 harvest mouse shot no birds so went back to work on accumulated stuff - got done early so set out toward Bard & drainage canal to search for musk rats - didn't get any but saw King Fisher & bunch of Ducks. Got another Verm. Flycatcher & saw several more.

Dec 4 - Saw Barn Owl after dark while enroute home . Moonlight so could be certain.

Dec 5 - traps had 2 Cotton Rats 1 of which was night so out after gophers 3 miles away & got 2. During afternoon set a line of traps nearby also got Sage thrasher.

Dec 6 - out after hasty breakfast. Cotton Rat traps had 2 - 1 broken skull - doen to gopher traps - but poor luck prevailed traps proving too small for three gophers - got 2 pocket Rats in traps and shot a sage sparrow - Vesper & Savannah Sparrows thick - also saw few ~~Barn~~ Cliff Swallows -

About noon the wind started up with a rush and night found it still raging -

Dec 7 - wind blowing like hell - train didn't run yesterday. It blew the railing off nearby Bridge. Gopher traps & cotton Rat traps untouched. -

Owl trap set last night untouched - Cold as Hell & miserable - tent nearly falling down in wind - Dust and sand flying - Blew all night

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Dec 8 - went down line - cotton rat traps empty so went out after bugs - wind blowing still, finally got few - 2 yellow Flicker, 2 ♀ Verm. Flycatchers & saw bunch of Savannah Sprs. set traps in desert wash - also made quail trap on Edggar Eggar ranch - lot of Chipping Sparrows -

Dec 9, traps empty wind still blowing so stayed and put up skins.

Dec 10 - wind stopped & found lots of good birds - sage sparrows & 1 desert wren - saw birds 15 meadow larks also got 2 Gila Woodpeckers -

Picked up cotton rat traps as colony trapped out - set traps in brushy sticks & in a.m. didn't have a thing.

Dec 11 - had nice bunch of quail in traps also got some more sage sparrows - saw 1 more Sage Thrasher, got several birds & traps contained 1 Dipodomys.

Dec 12 - had lot of birds from yesterday so stayed in camp all day - set traps in evening in brushy creek. Very cold thermometer at 9'o clock 34°. 2 quail in trap

Dec 13 - traps had 1 peromyscus, 1 perognathus & 1 neotoma, shot 1 desert wren, saw a sage sparrow also a bunch of swallows Cliff - and a pintail flew out of a pond in alfalfa patch recently irrigated. In the late afternoon went down to M. Schuler who catches gophers for the Gov. and made arrangements for 25 gophers @ 15¢ each, also made a snare & quail trap had 2 quail got 11 gophers -

Dec 14 - Busy all day at accumulated stuff, traps contained 2 neotomas & 1 perognathus & 1 towhee.

Dec 15 traps held 2 neotomas, set 3 more rate traps - saw Phainopepla & 2 Cormorants flew over - heard about 6 Horned Owls during night & found place where coyote had carried medium sized over ripe water melon & eaten part. Wind blowing again but fortunately my new camp site is well protected & warmer.

Walked to Potholes in evening.

Dec 16 - traps empty so put out after birds. Shot several & put in interesting hour watching a pair of flickers playing "tag". They were both lighter in color than "cafer" and more redish than mearnsi but undoubtedly hybrids. They would fly from tree to tree hopping around in the branches issuing a kind of "ca-who" & then would fly into the air making a ratjer of an alarm note. They performed in this manner for some time when I shot the darkest one -

Got 6 gophers from M. Schuler & caught 1 myself also shot 2 pyresaphalus - 1 mean flicker 1 Savannah Sparrow, 1 Song Sparrow, 2 towhees & 1 Centurus.

Dec 17 - Traps had 2 neotomas and after looking over other lines went up river bottom was surprised to find that where had a large grove of cottonwoods were in spring to be entirely washed away by river during June high water. Shot another Myiarchus & 2 Song Sparrows & saw a nice Harris hawk, just of gun range - shot nice sage thrasher & Phainopepla in a.m.

Dec 18 - Traps empty so picked up some of main traps & set 2 new steel traps. Owl trap had nice screech owl. Sage thrashers getting more common shot 3 out of a nearby mesquite where they were feeding on mistletoe berries much to the displeasure of a pair of mockingbirds that claimed it. Several robins about. Walked down to Shulers in evening & got 8 more gophers making my 25 -

Dec 18 - found 1 of my steel traps sprung by Dypodomys & Bait stolen by fox.

Dec 19 - had only 1 wood rat in traps so picked up and reset - shot sage thrasher, phainopepla & 2 Cactus wrens - set long line more traps.

Dec 20 - had 3 rats 2 perognathus & 2 peromyscus - shot several sage thrashers & 1 Tree Swallow from flock. Weather sultry & cool nights.

Dec 21 - traps contained 2 wood rats - Bait taken from steel trap by tame cat. Shot several birds -

Dec 22 - traps contained 2 wood Rats - 1 peromyscus, 1 perognathus. Shot a desert wren & 2 yellow throat, saw thrasher (Crissal).

Dec 23 } all in stayed in camp

Dec 24 } about noon on 24th a neighbor came by & I sat near river bank and watched him fish saw few & mallard duck fly by in the late afternoon saw several redwings flying down river in evening had in mind to spend x-mas eve with him so put out after dark for his ranch - wind blowing sharp from south and looking like rain. Enroute Kelly flushed a Towhee that was roosting underneath heavy bermuda grass in roots of a scrub willow. Rained during night.

Dec 25 - so I had fine time drying up my bed as the patched plastic in tent leaked badly - put up few birds I had from several days

Dec 26 - felt better so went on long hike down valley, shot nice bunch of birds among them my first redwing run on to a flock of about 12 & got 7 -

I shot 3 across the canal & after removing shoes and socks & wading over I discovered a road runner busily thrashing a wounded redwing much on the order of a cat playing a ball. He would thrash it a while & then pick out a few feathers.

After seeing me watching it it started to carry off its prey when a shot stopped the escape.

Got 1 Mt. Song sparrow saw 1 more -

Saw nice bunch of pintail ducks & very large flock of linnets - few doves both were feeding on unpicked maize field.

When near to camp saw several Yellow flickers - got 1 & 1 hybrid -

Rained during night & with rain on Dec 24 soaking out my tent pegs & tent blew partly down during rain had hell of a time

Dec 27 - Kelly sick so went to Potholes after castor oil Road runner got too close to camp & suffered accordingly, skinned accumulated stuff & ~~set-lines~~

Dec 28 - still going on stuff from 26 set line and traps in evening-

Dec 29 - traps had 4 dipodomys steel traps empty after fresh bait was placed went on down line wind blowing gale, shot 2 Empidonax 1 Pyrocephalus Juv & 2 flickers red & 1 hybrid and a yellow throat saw few chipping sparrows Vesper sparrows and 1 Junco which I didn't have chance to shoot. Shot 1 brewers sparrow from small flock

Dec 30 - put up stuff from '29 and shot Bait

Dec 31 - started out with all traps on hand made sets on desert again enroute shot sapsucker & Palmus Tharsher the latter in neighbors woodpile

Jan 1 - went to Potholes after mail, rained nearly all day, got new bunch of traps - shot a few birds for bait -

Jan 2 Old sets had 1 Fox set out all new traps -

Mr. E. E. Sais  
Laws

Dear Sir:

I have instructed Joe to leave Laws so he could arrive at my camp on the evening of Aug. 15th.

Very truly

Laurence M. Huey

P. S. On an afterthought - I wish the above to stand unless you hear from me to the contrary.

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July 27th 1921 through November 26th 1921

HIGH SIERRA

(LAWS, KEELER, LONE PINE ETC. ETC.)

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July 25th

Arrived at Laws about noon and after unloading the equipment drove over to Bishop for lunch & to make all final purchases before leaving.

I made an arrangement with the Lutz Comp. to furnish such need as might occur while I was in the mts.; deposited \$160. in the Inyo County Bank so checks could be drawn to pay packers etc. and found storage for the Ford at the Watheson Garage.

Spent the night at Laws camping near the packers corral in a nice grassy road.

July 26th

Was awakened at 4 a.m. by the packer and made a 5 o'clock start. All the stuff had been loaded on the hay wagon which was partly filled with hay, this being taken up Silver Canyon to the end of the road and where the pack mules were discharging their cargos of wood.

Silver Canyon proved to be a large crack in the earth's surface and displayed an end grain view of granit, lava formations with a clearness not often seen. The curls, kinks & breaks reminded me of many colored ingredients stirred up in a kettle carelessly and not well allowed to cool and tossed into a box.

I arrived at the wood camp (alt. 7500) about 9:30 and a disolate hole it was, not a tree or bush. Here the canyon walls were about 1000 ft apart and nearly perpendicular part of their hight. Pinyon pines were growing on the steep sides where ever a suitable place occurred. There trees, however, found their lowest limit of range before the bottom of the canyon was reached. A small stream of water was running down the canyon & was bordered by succulent annual growth. The rushing torrents of spring water appear to change the stream's course yearly & would in consequence allow no shrubs or trees to exist.

All the rest of the day was spent fighting flies & trying to find shelter from the glaring, torrid sun that shone unmercifully into the rockbounded canyon.

Very little animal or bird life existed here and during the day a single ammospermophilus watched us cautiously from the shelter of a rock pile near camp. One greentailed Towhee & 1 unidentified Hummer were the only birds seen.

The pack outfit arrived about noon loaded with pinyon wood from the mts. The packer was a Mexican named Joe and of the cheerful goodnatured type.

July 27th

Arose very early and after getting the outfit loaded on four animals, started out at 5:40 . The pack animals consisted of 3 small mules & 1 horse, while the pack equipment was not the saddles usually found but what Joe called "appuajos" or a huge leather pad covering the greater portions of the animals's back and reaching well down over its sides which after being thrown on and lashed down with a large leather cinch was mounted with 2 huge iron hooks called "pack hooks". A tremendous burden could be applied to this outfit and the capacity limit being when the mule would carry no more.

The first 5 miles of our route was up the old Goldfield road. This, now being unpassable to wagons, proved an excellent wide trail tho at places rather steep.

The route lay up the left or north branch of Silver Canyon and after going as far as the canyon bed was passable took to the mountain side by switching back.

About halfway up this first switchback the Pinyon belt was reached and our route was through this association for several miles.

On the steeper parts of the trail the packs began to shift on two of the mules and, to my astonishment, Joe enlisted the service of very large flat rocks as counter-balance. The extra weight to the already overburdened mules notwithstanding!

After about 3 hours of steady uphill climbing our course changed from the old wagon road to a trail, and trail it proved to be in every sense of the word, for, from the general aspect it was used but seldom and in the beginning made by leading a couple of surefooted burros along the steep mountain side. This trail took us in a general northern direction and as the higher elevation was gained the association changed, slowly at first with a scattered growth of Juniper mixed with the Pinyon. Then suddenly as a large amphitheater was reached in the mountain side the growth changed to Spruce without even the Juniper except at the very edge. A dark crow was seen flying by & A.M. heard the "tin horn" call of Pigmy Nuthatches.

The trail here was dangerous as the formation was of coarse sand with the occasional appearance of rock ledges. In places, where the trail was broad enough to permit large accumulations of small Spruce cones were piled up. These were sent skitting down the m.

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mountain side by the animal's hoofs as they passed.

Trouble with the packs commenced in earnest here and after my ammunition box had slipped out, fortunately on the uphill side of the trail, Joe & I reset the loads on the mules.

After an hour of this spruce association the trail led out onto a sage covered slope with not a tree in sight, except the forest behind us thru which we had passed and a very small patch on a hillside to the northwest. These were about half dead, frozen by the winter blasts.

This sage slope appeared to be about 6 miles long and 2 miles wide sloping with gradual ascent from the bed of the dry stream which is the head of Silver Canyon, to the rocky crest of a long lava mountain to the east.

Spring flowers were at the height - Lupine with its dark blues and Paint brushes with their scarlet gave vivid colors and a touch of splendor to the monotonous green of the sage.

Brewer Sparrows were seen flushing from beside the trail to perch a safe distance away on the top of a sage brush chirping warnings to their nestlings which had just left their nests and were too weak to seek safety on the wing.

As we topped the summit at the upper end of the sage slope our destination - Big Prospector Meadow - spread out before us and such a disappointment it was. My hopes seemed blasted as the place proved only a grassy flat sloping gently towards rocky barren mountains on the n.w. & s.e. side.

The drainage was towards the east and the now dry creek ran through a boulder-strewn gap between low sage-covered hills. A few half-dead Lodge Pole Pines & Spruces were growing on the side of a small hill to the east and a pair of Golden Eagles were perched on a dead tree top. They flushed as we approached.

A lone one-room cabin stood near a large rock outcropping in the middle of the meadow and an acre or so was fenced off nearby for the forest service. This pasture contained the only water in the place and it was disappearing so fast that camping nearby seemed unwise.

To the north of the place a spruce forest was growing on rocky brushless slopes giving a most uninviting aspect to a bird collector.

We followed down the dry creek in search of water and to my disgust the pungent odor of sheep manure again assailed my nostrils.



In a small valley about 1/3 mile below Prospector Meadow a beautiful flow of ice cold water rushed from a spring which had been boxed & piped to a water trough by the sheep herders.

An old deserted log cabin was built against a rocky point which jettied from the hill on the south side of this small valley and this appeared to be the only campsite available.

After unloading the packs and getting a bite to eat Joe & I set out, on horseback to scout the surrounding country.

Backtracking we circled Big Prospector Meadow in search of water but none was to be found. Then after looking through several deserted cabins on the northern edge of the timber we mounted the ridge which gave us a view of Posner Creek.

A good stream of water was flowing down the stream bed and it appeared to be bordered by willow & other brushy growth tho we did not get close enough to determine their identity.

The place appeared to be the best collecting locality to be found but was too far from where I wished to get my mammals. Yet for bird collecting it was within walking distance so as a camping place it was discarded.

We then rode back to where our outfit was and decided to camp near the old cabin.

camp was set up and 2 mule loads of wood brought down from the mt. back of camp.

July 28th

Joe left with the stock about 7 a.m. & I wrote notes until lunch time. After lunch I made 6 sets for gophers in meadow nearby then we took our guns and walked up on the hills south of camp.

The country beyond the hills to the south was rolling sage covered flats with occasional buttes of rocks jutting up. This on the map was Sage Hen Trails.

A sharp lookout for sage hens was kept but none were seen, nor was any other living thing except a rock wren which A. M. shot.

After spending an hour on this mesa land we went back to the rocky hills which bordered Big Prospector Meadow

on the east. Here I searched carefully for Conies finding lots of old manure but very little sign that looked fresh. I noted quite a little cut straw left over from last year but the green grasses were still unmolested this season tho the seeds were in a ripening condition.

This condition did not give me very much hopes of getting a large toptype series of Conies.

I spent 2 hours watching the most favorable rock pile with no results.

Aunt May went on down to the valley floor where she shot a Mt. Chickadee and 2 immature Sparrow Hawks from a Lodge Pole Pine.

On getting back to camp I found my gopher traps held 3 gophers and a Schyler held 1 Golden-mantled Chipmunk. Aunt M. had set 4 Schyler's near some rocks on the east side of the valley.

July 29th 1921

My gopher traps held 1 gopher & the Schyler's 3 Chipmunks (G.m.). About 9 o'clock a very large band of sheep were driven to the spring for water and the shepherd who was of the thieving basco breed came to my camp staying the best part of the day so couldn't leave camp with safety.

During the afternoon I caught 2 more Golden-mantled Squirrels. Sheep left about 4:30.

July 30th

After breakfast Aunt M. struck out for Poison Creek while I went after Conies on the mountain sides west of camp.

I found some sign but very little of it fresh. I spent 2 hours sitting quiet, keeping a sharp eye & ear for any signs of these small animals but was unsuccessful.

I then climbed to the summit of a high peak where I could get a bird's eye view of the surrounding country. I gained a wonderful view of Poison Creek right below with its small stream running like a line of silver between the steep rocky canyon walls. Cotton Wood Creek & its tributaries spread out with resemblance of a hand against the side of Sheep Mt., each small stream finding its source in a deep narrow-walled canyon on the Mt. side and all of the several streams finding their way to a single outlet which wound its

way into a meadow. The whole system seemed to shimmer in the sunlight with aspens - hence its name Cottonwood Creek.

White-Mountain Peak stood out in the background, its dark color & pure white snow bands giving it a sharp contrast to the lower bare volcanic ash mountains in the foreground, all of them void of trees and probably without life as no greenish cast of the latter could be seen.

Large thunder clouds banked up to the north of the range giving the landscape a splendor never to be forgotten.

Numerous meadows were noted in the Cottonwood Creek systems and would make a good collecting locality.

Aunt May arrived in camp about 1 p.m. tired out from her hike but with some nice birds, 3 Hermit Thrashers, 2 White-breasted Woodpeckers, 1 Empidonax & 1 Warbling Vireo. She found Poison Creek's source to be a large spring bubbling from the rocky creek bottom. An abundance of wild parsnips and Larkspur was seen growing along the water's course, both species of which are deadly to sheep and cattle. This vegetation gives Poison Creek its name.

The stream ran on the surface for about a mile, then sank and rose no more along the distance down the canyon which she covered.

A grove of Aspens about 1/3 of a mile long was growing in the canyon floor and in the near proximity of the stream, in this grove she found the few birds collected.

After lunch I took a dozen Schyler's baited with bacon, dried peaches & bread, setting them for Conies among the rocks on the hilltop east of camp.

I was kept busy during the afternoon by a good catch of Golden-mantled Squirrels.

When going up the hill at sunset to look over my Cony traps, I saw a Marmot. Signs of this animal had been noted in every large rock pile examined, tho this one was the first seen. My Cony traps were found empty.

July 31st 1921

My Schyler's, set yesterday amongst the rocks east of the hilltop east of camp held three Bushy-tailed Woodrats and one Peromyscus m. sonoriensis.

After getting up my four skins and caring for the skulls from yesterday's specimens I hiked out on the northern edge of

still searching for inhabited cony slides. I found a little sign amongst the rock piles but neither saw nor heard a cony.

I did collect 1 each of *Eutamias s. inyoensis* & *E. pictus*. The latter while not abundant, are found inhabiting the rockpiles around which the sage brush is growing.

When going up to look over my rat traps this morning I saw a very large rabbit running just out of range up the hill in front of me. Judging from its large size & short ears I took it to be a snow shoe.

I had noticed lots of round rabbit dung through the rocks & one place in particular appeared to be the burrow of a rabbit so I set a small steel trap in the entrance.

Saw a large bat flying at dusk but it kept well up out of range. I tried to down it with a charge of 8s but the shot seemed only to accelerate its speed & the bat promptly found other feeding grounds .

Aug 1st 1921

My Schylers held a single Woodrat so I struck out on the sage mesa to visit rock piles to the east of camp.

I found a pile of sharp broken rocks that had every condition favorable for cony inhabitation and as I stood peering at it from a distance of about 75 yards my eye was suddenly attracted by a roundish object perched on the profile of a ragged vertical rock ledge.

I watched it fully a minute hoping to see movement but none occurred when suddenly the run being in just the right position I caught the gleam of long whiskers.

Fortunately a large dead tree gave me cover for successful stalk & I came up within 50 ft, all out of breath and with my heart pounding from the quick uphill run, and, in the excitement, pulled the wrong trigger.

Imagine my disgust at seeing a cloud of hair arise from the much-sought animal after so many hard hours spent in their search!

I spent a futile hour watching the slide but found no more conies there.

Another good looking place was seen on the edge of Sage Hen Flats and about a mile from where I had killed my cony, so set out for it.

This large slide proved to be well inhabited as the little squeaky cony calls were heard in many places. I spent over 2 hours watching but didn't have even a glimpse of one tho they were heard barking within a few feet of me.

Getting out of patience & nearly freezing I set out to explore Sage Hen Flats. This place proved to be one of those desolate Sage plains and almost void of life.

Each small hill was crested with a large outcropping of rocks which on inspection seemed to be inhabited by marmots tho they were always out of sight by the time I came within range of vision. I was fortunate to collect 4 specimens of *Eutamias pictus* as I scrambled over the rocks.

As I neared the northern edge of the Flat I chanced to see a marmot within range & collected it. A second specimen was taken near camp which I reached about 4 p.m. tired out.

Set my gopher traps again this evening. During the day A. M. had picked up a few birds near camp.

Aug 2nd

My gopher traps held 3 gophers & I was kept busy at camp all day with yesterday's catch.

Aug 3rd 1921

After breakfast I took 15 Schylers to set out for conies. I chose a rocky hilltop that bordered Big Prospector Meadow on the east and where I had found lots of cony manure on a previous visit. This is probably the same place Grinnell's party took the type series.

I set my traps & stayed around the rock slide a couple of hours but not a chirp did I hear so set out on a hike.

I chose the summit of Campito Mt. as my goal as its rocky crest looked favorable for conies & also I hoped to find Rosy Finches there.

After a tiresome 2 hour grind I scaled the rocky peak and found no life whatsoever in fact, the only life noted on the summit was 2 gray flies & a grasshopper. The latter well off his beat.

The view from this point at 11543 ft altitude was beyond words. To the south I could see plainly the Grapevine, Coso and Panamint Ranges with Death Valley laying between the two former tho I could not see the Valley's floor. To the East I had a grand view of part of Nevada but could not identify any of the numerous mountain ranges that were plainly visible.

On the northern side of Campito, Sheep Mt., which is much higher, blocked the view and only its bare south slope and the head of Poison Creek with its sparse growth of Lodge Pole & Spruce was visible.

The most inspiring scene was to the west with Owens Valley stretching out as checkered ribbon in the foreground and banded with the snowcapped sierras, which seems to be on a level with me across the valley.

Not finding anything to collect on the mountain I set out again for the cony colony where I had set my traps.

Arriving there in due time I was disappointed to find the traps held but a single chipmunk and I searched further amongst the rocks in hopes of locating the runway of at least a single cony, but not a fresh sign did I find, not even a nibbled clump of grass tho grass was growing here & there thru the rockslides.

I again sat quiet for more than an hour or so; as the sun was near setting & in my experience these animals are always most active at that time, but not a sound was heard. I did aux a young marmot & several *Eutamias s. inyoensis*. I am firmly convinced that Grinnell and his bunch exterminated the conies in this region and that topotypes of *O.s. sheltoni* will never be available.

I left the Schylers set thru the rocks and returning to camp set my gopher traps again in the meadow.

Aug 4th 1921

Busy at camp all day with yesterday's catch. My Schylers in the rock slide held 1 ♂ Woodrat.

The gopher traps captured a bunch of immature gophers & by resetting the traps in the same burrows the catching continued thru the day.

My Schylers on the hilltop when looked at this evening held 3 Golden-mantled Chipmunks.

During last night a thumping near A.M's tent kept her awake a greater part of the night and on close scrutiny this morning I found rabbit tracks and dropping nearby so in consequence I set 5 small steel traps in sandy paths thru the meadow edge this evening.

Aug 5th 1921

My Schylers held a *Peromyscus m. sonoriensis* & the rabbit traps were empty. The gopher traps which I had reset in the same burrows held 2 more young gophers.

Aunt May set out hunting about 9 a.m. taking up over the mountain east of camp with a definite idea of killing a cony or so -

She returned to camp about 1 p.m. with a sage hen, a Nuthatch & an immature cony.

In a rocky slide she had shot a weasel, but unfortunately the animal was poised on a rock near a deep crevice when killed, falling beyond possible recovery in the depths of the slide.

The cony was the only one seen tho several hours were spent in favorable rock piles where considerable sign existed, nor was even a "cheep" of the animals heard.

Much excitement was still apparent over the capture of the sage hen. 8 or 9 were seen and she concluded that had I been there with the 12 gauge the whole flock could have been collected!

After she had rested & lunch was over we set out for the locality where the weasel had been shot in hopes of removing some rocks and reaching the specimen.

I spent a laborious hour or so preying and heaving on the boulders removing several tons to no avail. The dead weasel having fallen at least 10 ft down in the loose rocks.

After getting tired out at the task we sat in a rock pile until dusk hoping to secure another cony.

Aug 6th 1921

Made an early start bound for the large rockslide in which I had discovered conies on Aug 1st. We arrived there about 10 o'clock with the sun beating down and not a bit of breeze. I brought 15 Schylers, which I baited with various kinds of bait including such choice delicacies as almonds, walnuts, dried prunes, dried peaches and such staples as bacon, bread etc. The traps were set in what appeared to be runways between the rocks. Aunt M. had the first shot & landed a cony.

Hour by hour went by with both of us baking in the torrid sun but neither willing to give up without a thorough trial.

In the middle afternnoon, A. M. her throat parched from thirst walked over to a spring about  $\frac{1}{2}$  mile down the slope after water and when there encountered a family of Nuthatches, 4 of which she collected.

Meanwhile I had 2 lucky shots and was fortunate in picking up both my conies.

We stayed in the rock slide until the sun had set. A.M. getting 2 more shots, killing each time but unfortunate in having the victims drop irretrievably into deep crevasses. On picking up my traps at dusk not one had been sprung tho I am positive conies had been past them many times.

Made camp by dark too tired to fix more than a cup of tea. Set about a dozen mouse traps about the rock house & tents where Peromyscus had been nibbling at our provisions.

Aug 7th 1921

After getting up yesterday's kill and the single Peromyscus caught in my traps we set out to explore Poison Creek.

I found the sides of the mountains which sloped to the creek even steeper than A.M. had described them on her first visit and she had said they were "straight up". A scattered forest of Lodge Pole Pines & Spruce was growing wherever affordable location existed and the vegetation of the narrow canyon floor was noticeably of annual character owing to the rush of spring floods which swept all trees and for some distance up the slopes. The creek, true to its name, as A.M. had said, was bound to have poisonous weeds growing abundantly along the banks. And the record of their toll, before the place was fenced off, was still to be seen in the many piles of white bleached cattle bones. I searched through this vegetation and found droppings of what might be Microtus so will try to plan some way to get a night's trapping thru this canyon.

Near where the source of the stream gushed from the rocky canyon floor, a mountain side of loose rocks was found to be teeming with conies & I immediately took a seat in their midst, while A.M. proceeded to her aspen grove where Hermit Thrushes lived.

Large "cumulus" clouds began to drift in from the south and after them came the threatening "nimbus" so by 3 o'clock rain was expected at any moment and A.M. had not returned from the hunt below tho I had heard the 410 crack several times. Each time the sound seemed nearer.



I had had fair luck killing 3 conies & picking up 2 of them. The 3rd having fallen down, down into a bottomless canyon and tho I pried & jostled boulders trying to retrieve the dead animal my efforts failed. While in my endeavor to retrieve the lost cony I uncovered a large shock of dried vegetation about a bushel in all & which was mostly parsnip beans, evidently this parsnip doesn't have the poisonous effect on conies that it has on cattle.

I also killed 3 chipmunks 2 of which look like "Eipictus" but may prove to be of the "alpinus" groupe as no sage exists in the canyon where the animals were collected.

A Cooper Hawk flew by as I was watching for conies & suffered accordingly.

Aunt M. had fair luck collecting 3 Hermit Thrushes, 3 Hummingbirds, 1 young W. Warbling Vireo and an Olive-sided Flycatcher.

A slight sprinkle of rain sent us back to camp in a hurry as things there were not in any way prepared for a storm.

Aug 8th 1921

A slight shower occurred during the night but it was not until after daylight that Jupiter Pluvius began in earnest and the day was kept wet with showers keeping even the chipmunks in the seclusion of their dens and the rest of the population in this vicinity under the shelter of tents, shivering from the tremendous detonation of the thunder & lightning.

Lucky thing that I had some skinning from yesterday's kill.

Aug 9

We made an early start for Poison Creek armed with guns & my sack of mouse traps.

While I was setting my traps A.M. proceeded down the creek to her Hermit Thrush thickets where, as she approached, she heard a very faint call note. Seeking the bird responsible she located a very young thrush and after collecting it sat quiet a few minutes and collected the parent which was lurking close by in the thicket.

Twice she worked the same trick collecting 4 Hermit Thrushes & a Western House Wren for the day.

After setting my traps I selected the soft side of a rock for seat in the center of the cony colony. I had only spent an hour there and collected 1 cony when the already threatening clouds began to precipitate so I sought shelter under a spruce tree hoping the shower would blow over. There was no abatement however, and after an hour I was joined by A.M. We built a fire and spent the entire afternoon trying to keep warm and dry.

About 5:30 we decided to leave for camp so A.M. went on while I looked over my mice traps. To my satisfaction I found 8 *Microtus mardax* had been caught in spite of the rain and after resetting and placing the traps in the most sheltered positions obtainable, I too set out for camp. I caught up with A.M. at the top of the hill and we arrived in camp at dark, cold & wet & weary to find it a wet and flooded camp with wet wood to start a fire; anything but a cheerful place to be. Old man gloom sure had his inning and I must say anyone who would climb up & down out of Poison Creek twice is a damn fool - yet I have still to go back tomorrow - for a handful of rats!

After a refreshing change of dry clothes & some warm food, we sat down to put up some of the accumulated skins so that the burdens of tomorrow might be lightened.

Aug 10th 1921

After getting up our skins we wobbled back to Poison Creek. Maybe it is not clearly understood just what this trip is so a few figures in regard to the elevations might throw a bit of light on the physical exertion of this hike.

The air line distance to the traps is less than a mile but a very steep hill lays between camp & the traps. The elevation of camp is 10300 - the summit of the hill 10750 - the bed of Poison Creek 9500 - and about  $\frac{1}{2}$  of the miles distance to the traps is in the bed of Poison Creek. So it can be readily comprehended that it takes considerable "want to go" power to tackle the climb once, not speaking of it as a daily excursion. Erwin S. Cobb's "Great Reduction" has nothing on me.

Well, we made it and to my delight I captured 14 *Microtus* and the first Navigator Shrew I had ever collected. The catch was enough for me & I retraced my tracks for camp, leaving A.M. to hunt and come in later.

A threatening sky drove her home before the hunt was over & her kill was somewhat limited. She captured a single specimen of each Hermit Thrush & a Warbling Vireo in the Aspen thicket and on the trail thru the trees she heard a Nuthatch on the hillside and was fortunate to collect 2 of them.

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About 3 p.m. the daily rain commenced and now it poured and how we laughed - in camp, well fed and dry!

During a lull in the downpour and about sundown A.M. said she heard a Nuthatch in the trees above camp and tho I made light of her ability of imagination in hearing bird calls at that hour and in the rain she set forth & within 5 minutes returned with 2 Nuthatches & a Sparrow Hawk.

Aug 11th 1921

A stormy night ended with a cloudy dawn & a violent cold, cold wind which threatened to raise the camp and to prepare breakfast proved quite a feat tho it was accomplished after much effort and working.

Not wishing to get wet I waited for the storm to abate and it was not until noon that I was able to get over to Poison Creek after my traps. They were completely routed by last nights rain & hail. I was fortunate, however, in having 2 Microtus & 1 Navigator Shrew caught in traps that had been well sheltered from the tempest.

A violent gale fairly raced down Poison Creek & not even a chipmunk was out so after gathering up my traps I returned to camp. On my arrival there I found the wind had veered to the Southwest leaving camp in a sheltered position and Aunt May was busily coaxing a Clark Crow with delicate titbits. The bird, which appeared to be in a sickly condition would eat readily but could not retain the food in its crop and wishing to rid itself would thrust its beak into the soft ground, disgorge and cover the deposit with a small chip or any handy loose object which was movable. Later on, when special attention was not being given, the crow returned to these caches searching diligently for the deposited titbit which, if not already removed by the plundering pet Golden-mantled Chipmunk about camp, who seemed to know of the bird's trait, would again try to assimilate the food.

After getting up my few skins I set out gopher traps in the flat nearby.

Aug 12th 1921

My gopher traps held 3 gophers and a few Schylers set on a nearby hillside kept me going all day.

A.M. went hunting on the wooded slope east of camp collecting 1 Nuthatch & 1 White-breasted Woodpecker, the only worthy birds seen.

The whole day was kept astir with interest as the nutcracker was continually about for food and so tame that it actually accepted food from A.M.'s hand. The bird proved to be a comic clown & had the most silly hop, reminding me of Charly Chaplin.

It spent the greatest portion of its time at the front of the tent near where I was skinning and as meat seemed to be a favorite food, consumed the hind legs of all animals skinned during the day, this meat being cut in very small pieces. Should the pieces be too large for convenient swallowing they were buried nearby & covered with a chip.

The crow seemed to possess no memory looking at all when in search of caches would sometimes resort to the wood pile turning over chips until either tired or discontented with results.

Occasionally during the day and especially during the lunch hour both the chipmunk & the crow would show up together & in that event the crow would utter a sort of prrrrrrrtt under its breath as it to say "look out" & the chipmunk would heed, watching the meal in safety from a nearby rock.

I had only finished setting out my gopher traps this afternoon when a very large band of sheep (over 5000) were driven in to water so had to run out & pick them up posthaste. The sheep with the 3 herders stayed in until almost dark so was unable to reset the traps.

Aug 13th 1921

Again this morning I had only completed the setting of 10 Schylers & my string of gopher traps when another bunch of sheep from the north appeared so had to gather them all in again. The two attending shepherds looked so stealthy & the  $\frac{1}{2}$  dozen dogs so ravenous that both A.M. & I stayed in camp to guard, spending time at various odd jobs.

The sheep pulled out about 2 p.m. & I immediately reset all my traps then both A.M. & I struck out for Sage Hen Flats in search of a Sage Hen as we both felt the need of meat for food.

A bunch of 5 was found after much hiking. A.M. killed a juvenile on the ground & as they rose I knocked down a large ♀ & a juvenile, the latter being only winged, escaped.

We made camp by dark looking over the traps which held 2 Golden-mantled Chipmunks & 4 gophers.

Imagine the surprise on nearing camp to find fresh Horse tracks & on lighting the lantern to find 20 lb chunk of fresh beef - the first fresh meat for a month!

Aug 14th 1921

My gopher traps held 2 gophers & the Schylers 5 chipmunks when looked at after breakfast. All over everything this morning & down by the spring the ground was frozen, something like pavement as I walked over it with hobnailed shoes. Some cold for August 14th - think of Yuma! - and only few hundred miles away from Death Valley also which is less than 50 miles away air line. I started in to skin looking over the traps every few hours During the day I caught 8 chipmunks.

A.M. went hunting on the hillside east of camp returning in about an hour with a family of 5 nuthatches & a Black-throated Gray Warbler. The latter would indicate that the local lateral migration had commenced tho very late this year.

The crow still proved a source of abounding pleasure & has been named "Clark". Today he excepted food from my fingers. Another crow put in an appearance just after daybreak this morning & Clark set up a trouble scolding as he didn't want to share his good fortune with anyone.

A most amusing incident occurred today for when he is given a piece of food too large for immediate consumption it is either buried or placed on the crevice of a log or tree. It so happened that I gave him a piece of chipmunk meat about the size of a quarter and this he placed in a crack in a piece of store-bought wood, the nearest handy place he could find & on top of the meat to secure it he placed a small chip & a piece of charcoal which he gleaned from the fireplace nearby. These Clark placed by sharply driving them down with sharp blows with his beak - Woodpecker fashion.

Aug 15th 1921

I picked up all my gopher traps this morning and found them to hold 2 gophers & 1 allospermophilus, the latter was coming out of the gopher hole & must have entered by some connecting passage elsewhere.

Spent the day packing, proof reading etc. While proofing specimens a black-headed Grosbeak lit on a rock nearby but being a strange bird in a strange place was unusually wary & flew at my first motion.

Joe came in with the outfit about sundown and brought as a token of his regards a fine large watermelon!

Aug 16th

The whole outfit including \$25 worth of extra grub was loaded on 3 mules & how they grunted. We hadn't more than started when Joe, spying a fine square slab of rock couldn't resist such a fine bit of contrband, so dismounting he looked over the loads & tucked it under a pack.

Rosa, the old mule was again proclaimed to be at death's door & certainly to die next year, tho this prophecy did not in any way excuse her from the 500 odd pounds of burden. But whenbeing loaded, each article was considered in regard to its individual weight, but the number of articles was neglected and the loading stopped only when no more space was available. However, Rosa did very well and caused no trouble.

Monkey, the smallest and to me the most intelligent mule was destined to be the "goat" this trip & having a very heavy load would, by tricks only pack mules can find a pleasure, keep rolling her pack to an overbalanced position, then by prancing and jumping and trotting try to unload it. Five times the pack on this mule received attention and then Aunt M. spoke up saying "Joe, you have too much on that mule" & Joe, responding said "No, Monk no good today, she got no bailey".

After we reached the summit and halted for a rest before descending the very steep trail into the mouth of Poison Creek, Monkey, in a very dejected manner, stood grunting and blowing, with legs apart, reminding me of props. Joe dismounting to look the packs over and with a fixed gaze on Monkey's load, said "whats the matter, Monkey? Something the matter! But you gotta go down!"

When reaching the gate on the floor of the canyon at the mouth of Poison Creek, which by the way was reached without disaster, a coyote was seen in the brush nearby tugging away as though caught and so it proved to be as he was fast in a number 4 victor which belonged to a trapper nearby. I took out the animal & will barter with the trapper when next we meet.

Camp location was soon established and will be known as McCloud Camp, White Mts. Mono Co., Calif. Alt. 9200.

This place is the site of an old "Cow Camp". A large Post Corral & an old log cabin, both in a state decay and fast falling to pieces were built on a small flat at the east end of a small meadow.

The canyon which ran from west to east was bounded by rocky boulder ground hills to the north & tree-covered

hills to the south. A very narrow valley floor was completely covered with sage brush which also grew wherever favorable places existed on both sides of the canyon. In fact, it seemed almost impossible to get away from its aromatic odor. A rushing turbulent stream poured thru the valley, its source being from a large spring about  $\frac{1}{2}$  mile above, where almost the entire 400 inches of water boiled forth. A scanty growth of willows existing in clumps appeared at intervals along its course & the spread of these bushes was greatly curtailed by the pasturage of sheep & cattle. The meadow grass above was also kept short by the cattle as when the bovine were driven out the sheep were turned in & in consequence the grass was gnawed off to its very roots. This, I believe, makes the place anything but favorable for the inhabitation of small rodents, but was the only available camping site in the vicinity & the rodents may have change their habitat slightly to meet conditions which have probably existed thusly for many years.

Being exhausted from the day's labor, after a bite to eat, we flopped into our beds leaving the adjustment of camp till tomorrow.

Aug 17th 1921

After getting up the tents which were erected with aid of aspen poles this time, I skinned the coyote, while Joe & A.M. straightened up things about camp.

I then decided to take the saddle horses and scout about the Cottonwood Basin so that I might have a better idea of the geography of the region & exert collecting activities to the best advantage.

We followed up the valley heading towards the Eva Belle Mine passing thru sage covered flats, green waterless meadows and dry aspen groves.

The whole Basin appeared to be of the original granite crust of the earth, remaining intact but falling between the higher ranges that bordered it on the north, west & south. It could be compared to a depression made by the foot in soft mud, which, the outside crust remaining intact, would be lower than the exuding mud which was forced from underneath. Of course Cottonwood Basin was not formed from outside pressure but by the crust being colder & the gas pressure underneath, forcing out the molten rock in the lines of least resistance allowing the solid part of the crust to settle. This area of granite showed the erosion of eons of time, it never having been disturbed while the mountains surrounding it were composed of sharp broken rock tumbled and rolled, with vegetation that gave humus to the surface and resistance to a forest.

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The whole interior of the basin looked like a desert zone with its sage, mahogany & occasional juniper and was enclosed on 3 sides (south, west & north) by higher forested slopes.

Just what affect this had on faunal life, I cannot say, but it did make zonal clarification so difficult as to be almost impossible.

In reaching the forest again the same species of Lodge Pole Pines & Spruce were found and they seemed to be the only conifers in the region.

Eva Belle Mine is situated just below timber line & after passing up a very rocky steep trail came out on top of the mountains. When about halfway up on this steep trail a Prairie Falcon flew over me. I let him have a dose of 8s at long range but the only effect the shot had was to almost unseat the 2 other unsuspecting roders of the party from their mounts as the mounts jumped and pranced on the precipitous trail.

This must be the Canadian-Arctic zone as nothing but a very shunted grass of the Fox-tail family existed here and the wind so cold that my teeth actually chattered. A more desolate region I had never before seen. White Mt. Peak stood out in bald prominence to the north with a single bank of white snow shimmering in the sunlight & we headed in that direction hoping to climb to its summit.

We didn't get very far however as my horse began to bleed at the nostrils from elevation - we now being about 13000, so unbridling the mounts and turning them lose to graze, we ate our frugil lunch - a sandwich apiece & a few cookies. Water was carried but the chilling air forbid our indulgence. This section of the mountains proved as dry as the desert but lacked the sapping heat and I believe a person could exist here on one small drink of water a day.

I kept a sharp watch for Rosy Finches but none were seen. In fact the only birds noted were 2 Sparrow Hawks chasing a Red-tail high up over a peak.

Insects were more abundant & lots of small grasshoppers beetles and butterflies were seen.

Returning to a small rocky gorge just above the Eva Belle Mine where, when passing I had noted it to appear well situated for inhabitation by conies, I spent an hour in their pursuit.

Here also as we were passing on our upward journey a coyote had been roused from his lair and I now had a chance for its examination. Apparently he had been stalking conies as a deep narrow cut caused by water was well overgrown with rank grass and lots of cut straw showed



evidences of cony work, while the bank above on either side for a distance outward of about 2 ft was trodden until the grass was yellow, having been worn by heavy feet. This must have been the coyote's cony trap - he laying in wait on the bank above while the secretive conies sought to harvest their hay using the dry water course as a cover to hide themselves from passing enemies, tho falling easy prey to the quick canine, who when roused seemed reluctant to leave, but never getting within range of the Parker.

Two conies were collected during my stay and A.M., tho much fatigued from the ride, succeeded in killing a single Nuthatch in the trees below.

We made camp about 5 p.m. well phased with the day's ride, only to have our pleasure shattered by the absence of the 3 mules which had in some way succeeded in getting thru the fence.

Joe set out in pursuit with prospects of a long ride ahead, however, he was back with 3 galloping mules ahead of him, in about 2 hours, having overtaken the runaways near the summit above Poison Creek.

About sundown I set a string of traps through the willow clumps & close to the rushing stream.

While so engaged I saw a Navigator Shrew feeding on the mossy bank near the water and on my appearance the shrew dove into the turbulent stream, swimming under the surface with great agility and coming to the surface some yards below, sought shelter near a projecting root. By this time I was in pursuit and as I neared the spot it again took to the water and was lost to my view over a small rapid.

Aug 18th 1921

My traps held but a single *Microtus* & a *Peromyscus m. sonoriensis* so after breakfast I set out bound for Laws. Joe left with the horses to look over the country east of camp.

A.M. did not hunt today, being overcome by yesterday's journey she remained in camp to rest. I followed down the water course for about a mile searching carefully the clumps of willow that bordered the stream and such aspen & birch thickets that looked favorable for birds and small mammal sign.

There seemed almost a dearth of bird life over the region traversed and the only abundance found was near the decaying carcass of a dead cow around which a great number of White-crowned Sparrows & Green-tailed Towhees were assembled, feeding on maggots.

I collected 3 White-crowns & 1 Green-tail there.

As I was returning to camp I saw a single Violet-green Swallow pass overhead and near camp 3 Pinyon and a Wood-house Jay were seen. I took a long shot at the latter but did not succeed in killing.

In the afternoon the trapper came by who owned the coyote, which I was fortunate to purchase. He gave me a fine young Cottontail Rabbit (S.n. grangei) which he had taken from one of his traps in Campito Meadow. I also made a deal in which I hope to secure a series of the varmints from the region.

Set traps in the meadow above (west) camp this evening & while setting saw at a distance what I believed to be a Fox Sparrow.

Aug 19th 1921

My traps held 3 *Peromyscus m. sonoriensis*, 1 *Microtus* & an immature Hermit Thrush.

The *Microtus*, while reduced to a very minimum, seem to be living in stream banks & under debris which has been piled along the water course by spring floods.

I, not having written notes for the past few days, stayed in camp to work while A.M. having recuperated from the horseback ride went hunting up the meadow.

She returned in an hour or so with an astonishing bunch of birds - 4 Hermit Thrushes, 2 Fox Sparrows, 2 *Tolmiei* Warblers, 1 Green-tail Towhee, 1 Wright Flycatcher & 1 Brewer Sparrow.

I had set a string of Schylers & during the day they captured 2 *Eutamias pictus* & 1 Golden-mantled.

Traps were set this evening thru the rocky sage-covered hillslope north of camp & along the stream near willow clumps.

The weather began to settle this evening, giving the appearance of possible rain.

Aug 20th

My traps held a single *Microtus* and a number of *Peromyscus m. sonoriensis*, so after breakfast we both set out hunting. A.M. going past the place where yesterday she killed her Thrushes, picked up another and farther along on the side hill in the mahogany brush she collected 2 Woodhouse Jays. I killed 3 small *Empidonax*, 1 juv. Robin and a Nuthatch. Returning to camp about noon I found my Schylers held 3 Golden-marbled Chipmunks.

About 2 p.m. the trapper came over with a huge Bobcat, the largest one I have ever seen and we guessed the weight to be from 40-50 lbs. The cat had been killing sheep & several were known positively to have fallen its prey.

I worked on my specimens until about 4 o'clock saving only the Nuthatch of my birds & that was skinned by A.M. or me. The rest of the take was given to her, I having to spend the rest of the day on the cat. I found the animal extremely fat & indeed! smelled very much like mutton.

2 bats were seen flying about camp at dusk & I was fortunate in collecting one of them.

The cloudy weather took an earnest appearance this evening and during the night light showers fell.

Aug 21st 1921

Threatening weather kept us close to camp all day.

A.M. picked up a White-crowned Sparrow, a Brewer Sparrow & a W. House Wren in the brush near camp, while my squirrel traps caught 3 *Callospermophilus* & 2 *Eutamias pictus*. The mouse traps set about camp last night held a *Peromyscus m. sonoriensis*.

Aug 22nd

Made an early start bound for Poison Creek which proved more accessible from McCloud Camp than from Big Prospector Meadow.

A.M. was fortunate in picking up 3 Hermit Thrushes while I only took 1. It seems they make a very faint twit which clearly registers on her sharp ears but is entirely inaudible to me, so in consequence she kills the greatest number. While A.M. was showing me a place she had taken 2 Hermit Thrushes on a former visit a gruesome tragedy was disclosed by the finding of a Thrush's nest containing the dried up bodies of 3 newly hatched young. The nest was placed in a small aspen near the creek & Thrush-like - in plain view. Surely this is an example of collecting birds in nesting season and one to discourage even the most heartless collector!

Several migrants were taken including a Lazula Bunting which I shot from a bush near the creek, quite an unusual take for the altitude!

I sat an hour on the cony slide shooting one animal which was lost in a deep crevice.

Showers drove us back to camp where we arrived just in time to avoid a drenching storm.

I shot a bat in the evening and saw 2 others but was unable to get a chance at them.

Aug 23rd 1921

After setting about 15 Schylers for chipmunks we set out on a hunt down the creek one of us on one side & the other on the other side, rocking & beating all the bushes as we went.

This method proved fruitful as in about 2 miles we each had some good birds. I had a Blue-fronted Jay, 2 Hermit Thrushes, a Fox Sparrow, a Hummer and a small Empidonax while A.M. had 2 Fox Sparrows, 2 Hermit Thrushes & a White-crowned Sparrow.

Returning to camp the carcass of a dead cow was discovered by A.M. who killed another White-crowned Sparrow near it. Numbrs of birds had flushed to the hillside on our approach, so after some debate I decided to return to camp with what I had as my traps would surely fill out the day while A.M. resting, watched for birds to return to their banquet of maggots. She came in about an hour later having killed another Thrush, a Fox Sparrow, a Black-throated Gray Warbler & another White-crowned - making a very good day's work for her.

as I was returning I collected a Green-tailed Towhee. My traps held 2 Eutamias speciosus inyoensis, 1 Golden-mantled & 2 Eutamias pictus, so I too had a day's work!

Clouded up heavily about sundown & soon began to rain.

Aug 24th 1921

Rain - Rain - Rain, and not a thing to do but sit in camp cursing the weather. However, the storm abated about 1 p.m. & soon afterwards A.M. and I put our for Poison Creek on a hunt and to set my mouse traps.

As the sinking place of the stream was neared I saw a Hermit Thrush and blasted away killing the bird but on ejecting the spent shell from my aux I found the base had been blown off leaving part of the case in the chamber. This put my gun out of commission so A.M. had all the rest of the hunt getting 2 Thrushes, 1 Purple Finch & near camp a Fox Sparrow.

I set put my traps & returning down the line found a young Microtus had been captured.

I spent some worried time this evening extracting the exploded cartridge and for quite a while thought the thing hopeless but after enlisting the service of a piece of barbed wire, a pair of pincers and a nail the task was completed without injury to the gun barrel.

Aug 25th

Went up Poison Creek after my traps & found they held 16 *Microtus*, 1 Navigator Shrew & 1 *Peromyscus m. sonoriensis*, while a string of Chipmunk traps held 3 *E. pictus*, 1 *E. s. inyoensis* & 2 Golden-mantled. Truly enough to keep me working until midnight.

A.M. hunted about camp getting a Hummer, a Flycatcher & a young Purple Cassin's Finch. Then not being satisfied with this all she struck off down the Creek getting back about noon with 3 Hermit Thrushes, 1 Talmi Warbler & a White-crowned Sparrow. The latter was not saved.

Aug 26th 1921

Still busy with yesterday's catch & my Chipmunk traps caught a few specimens.

A.M. did not hunt today as many duties about camp needed her attention.

Set a string of traps along the creek & in the willow clumps.

Aug 27th

My traps held a single *Peromyscus m. sonoriensis*, and my Chipmunk traps during the day caught 8 Chipmunks.

A.M. went up the mountain above camp not wishing to get far away as the sky was heavily overcast. She was gone about 2 hours, returning with 1 Hermit Thrush, 1 Nuthatch & 2 Gray Empidonax.

The Trapper dropped in about noon, staying the best part of the afternoon.

I set traps in the sage near the edge of the aspen and spruce forest.

Aug 28th 1921

My traps held 1 *Microtus* & 3 *Peromyscus m. sonoriensis*. The *Microtus* came as a surprise & proved my theory that this marsh-loving species has taken to the dry side hills on account of the pasturage of the meadows, tho I do not expect them to be abundant under such conditions, as the succulent grasses which form the greatest part of their food do not exist in their present habitat & the mice must resort to the bark of aspen etc.

I set some chipmunk traps and then went on a hike.

The Trappee had informed me ywesteray that rabbits could be found near timber line on the Mts. toward the west and I set out in their pursuit. I walked west from camp and after an hour of rough climbing reached the desired location thru which I wished to hunt.

Scrambling over rock piles, broken down logs & thru rock slides I skirted timber line about 2 miles and after getting thoroughly tired out started back to camp.

The only living thing seen were 4 Cassin's Purple Finches & 1 Talmin Warbler of which 1 of the former & the latter were collected.

I arrived in camp about 5 p.m. ready to drop from exhaustion and just in time to avoid a drenching shower which came up suddenly. This shower ended off with a hailstrom and such hail I never saw before. One of the larger stones gathered up measured 13 m/m in diameter and many were probably larger as I didn't think of measuring them during the storm.

During the day 4 chipmunks were captured, 3 *Eutamias pictus* and 1 *E. s. inyomus*.

#### Aug 29th

I was too tired from yesterday's tramp to go hunting so A.M. went alone down the creek to her old hunting ground.

She returned about noon with 1 Spotted Towhee, 1 Hermit Thrush, 1 Cassin's Vireo & a White-crowned Sparrow. She said birds were getting scarce in that vicinity & she killed everything she saw except Juncos.

I captured a few chipmunks & in the afternoon walked up to the end of the meadow for a coyote skull the trapper had killed and taken only the scalp. Set more traps through the rocky hillside in hopes of catching a different kind of *Peromyscus* and several gopher traps were set in the meadow. Freshwork was scarce however and but 3 good sets were made.

#### Aug 30th

My mouse traps held 3 *Peromyscus m. sonoriensis* & the gopher traps 2 gophers.

A.M. shot a few common birds near camp, the best of which was a Black-headed Grosbeak.

Dark heavy Nimbus overcast the sky about noon & by 2 p.m. a torrent of rain was descending. It continued all afternoon, stopping during the night tho I did not notice it as at bed-time the torrent had turned to soft drizzle.

Fortunately the tents were well ditched and everything kept dry.

Aug 31st

Started to pack up, proof reading all specimens and getting things ready for an early start to Roberts Ranch in the morning.

Rain again commenced about noon today and about 3 p.m, turned very cold.

Roberts Ranch  
Sept 2nd

Mr. A. E. Sais  
Laws, Calif.

Dear Sir,

You seem to have overlooked the fact that \$,= were agreed to the rate of \$,= per day per animal for any extra trips when in the Mts. However if I am mistaken in the matter, it can be straightened up on my return.

I herewith tender my check for \$23= plus the \$1= Joe gave you (which was extra on a purchase he made for me).

This makes \$24= or 6 animals use for 4 days.

Joe is to return for me Saturday Sept 17th.

Very truly,  
L.M. Huey

Aug 31st

A heavy sleet set in and continued about 2 hours, clingin to the trees & giving everything & everybody a touch of winter.

Joe came in about 5:30 after spending 2 wretched hours in the lonely cabin at Prospector Meadow. He said "snow was about 18" deep against the side of the cabin and about 1 inch on the level". The apparajos had a pile of frozen snow on their tops and the mules were fairly dancing with chill.

Very cold during the night.

Sept 1st

I seemed hard to believe, when folding up the ice-covered awnings and tents that weather of this temperature could be possible in California at this date and wool shirts and sweaters were quite the vogue.

Trouble seemed to start with the first crack of dawn when the fire was stubborn in lighting.

But the main trouble however was encountered when loading the mules as an apparajo had been substituted with a pack saddle. This made necessary the readjustment and re-proportioning of the outfit as already both Joe & I had become used to the placing of boxes & bundles to their respective carriers and as the pack saddle would only carry about  $\frac{1}{2}$  the burden that the apparajo could the two mules wearing this appliance and already having an overload, were destined to more.

The faithful old black mule "Johnny" was loaded first, then turned loose to wait for the rest. "Rest" it was, but not in the way Joe had intended, as Johnny, tiring of standing under the heavy load, laid down and getting to what appeared to be a sitting posture, rocked to & fro, soon dislodging the pack from the hooks. He then arose, trotting jauntily to the creek as if to tantalize us and as was to be expected, this only added fury to our already flared tempers and Johnny received an extra cinching for his troubles.

A very tardy start was made about 9 o'clock and when reaching the point where the trail turned south-east in Poison Creek I discovered the ax had been left so I turned around, retracing my tracks to the old campsite where I picked up the neglected implement.

Meanwhilw the caravan moved on with Joe walking as it was found the mules could not carry the extra burden and part of the surplus resulting from the pack saddle was lashed to his saddle horse.

Near the summit A.M. spied a White-breasted Woodpecker on a dead tree & having the 410 on her saddle bow shot the bird.

The spruce forest in Poison Creek held a wintery aspect as a white blanket of snow was still present on the grass under their spreading branches where the now warm sun had not reached.

The cold snap had a decided affect on the birds as when we passed up the creek above the old campsite several new birds were seen - 2 ♀ Western Tanagers, a Fox Sparrow, a



Black-headed Grosbeak & a Hermit Thrush. A.M. stated that none of the above had been seen or heard her last visit to the willows as she had checked these haunts of Fox Sparrows & Hermit Thrushes carefully without results on Aug. 30th.

When I finally caught up with the outfit I found Joe had had considerable trouble with "Monkey", who seemed in no mood to carry a load, shifting it to a dangerous position at every opportunity and she carried the full collecting chests!

Meanwhile, when the caravan was halted, Johnny laid down and had to be unloaded before he could arise. The trouble seemed to me that the animals had not been fed properly lately and all, even the horses, seemed to be in a very feeble condition.

I learned from Joe that the black mule "Johnny" not so many years ago, was capable of carrying 700 pounds of ore from the Evea Belle Mine to Laws. This seemed unbelievable but on second thought I believe it true as the saddle scars & present condition of the mules indicates inhuman treatment during the past.

Even "Monkey" was carrying bumps from a fall last week when she rolled over in a rock slide for some distance with an overload of heavy Pinyon wood which resulted in a lump over her left eye was large as a cup.

On Sage Hen Flats we put the apparajo on Joe's saddle horse but not for long, as she had never packed with an apparajo before and the goods were threatened with destruction.

My saddle horse was then enlisted and after the goods were adjusted a couple of times went fine, tho I was on foot and had to walk the rest of the way which was about 16 miles.

After taking the old wagon road where it left Big Prospector Meadow things went along fairly well except Monkey, who had at least 40 lbs tied to a saddle trying to shake it off.

We reached the west end of Wyman Creek Canyon about 3:30 and as we proceeded down canyon I began to wonder just what sort of a place Roberts Ranch was going to be as the canyon was a barren rocky steep walled place with a scattered growth of trees on the summit of the hills to the south and the slopes on the northern side of the canyon were covered with low, stunted sage brush. This seemed to forecast desolation.

About six miles down the canyon a small trickle of water crossed the road. Here Joe halted saying that no more water

was to be found for about 5 miles & that the Berkeley boys had camped here.

The place was most desolate and threatening clouds gave promise of a heavy rain soon, so we decided to spend the night.

A wigwam was made out of 2 fence posts & a canvas, and under this we all sought shelter with our goods from the storm which soon assailed us. Rain poured all night long and by dawn everything was soaked, fortunately A.M. & myself put in fairly restful night, due to our rain-proof sleeping bags.

Sept 2nd

Dawn broke with a cloudy sky which was being driven northwards by heavy winds, this promised a rainless day with some sunshine.

As I was dressing a cony chirped from a rockslide some few yards away and A.M. heard them many paces thru the canyon. This proved the decisive point as I had intended to turn back to Laws this morning, for the place otherwise was so desolate as to discourage the most hopeful.

Joe and I set up camp, cutting willow poles from a thicket a couple of hundred yards up canyon. He left about 10 o'clock. A.M. & I put in the day fixing camp & resting from yesterday's journey.

Sept 3rd 1921

I decided to explore the canyon up above camp & so A.M. went down.

Things went well for me during the first 200 yards as the small trickle of water was bordered with dense thickets of willow & wild rose. I killed a young Hermit Thrush & a Talmin Warbler, when lo! the thickets ended where the water issued forth from under a boulder.

The rest of the canyon was sage-covered & desolate tho the canyon slopes on either side had countless slides of loose rocks. On examination I found nearly all the slides to be inhabited with conies, as bunches of vegetable forage was to be seen tucked under the large overhanging rocks where the winter snow would not hinder their use.

I looked over a number of these stores and found the conies were harvesting all available growth possible irrespective of kind and where no better choice was to be found, sage brush was dragged under the rocks.

I found that each rock slide was inhabited by only one

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or two conies and during the several hours spent watching for them, but 2 of the 5 taken, were shot from the same slide, tho these two were not taken in consecutive order, and their capture is well worth relating.

As I was watching a small inhabited slide, a cony was seen to appear near an elderberry bush and commence to nibble on the lower leaves of the bush, when he was shot. Returning several hours later, I, of course, glanced at the same spot where this cony had been shot and, coincidentally as I stopped withing gun range, another cony appeared in exactly the same spot. I restrained from shooting, to see what the animal would do as I felt sure it had not seen me. The cony commenced sniffing the air, raising its nose to an oblique position, as a deer does when fearing the presence of an enemy. After satisfying its fears the cony then began systematically smelling the rock where the other animal had been killed. I say systematically, because the cony kept backing up, smelling first one side then the other and after a general survey of the rock on which I sat, began sniffing at the perpendicular rock behind, where the shot had spattered.

After the inventory was taken the cony showed signs of fear & began to look about in a frightened manner when I shot it.

I walked about  $2\frac{1}{2}$  miles up the canyon finding nothing but sage and rock covered slopes. Returning I arrived in camp about 1:30 to find A.M. still absent.

I fitted 10 Schylers with wooden triggers & set these in conyslides near camp.

A.M. arrived in camp about 3 p.m. after having a wonderful hunt.

She found a fine large stream of water about 1 mile east of camp and as far as she went down, the stream course was heavily bordered with thickets of willow and wild rose, really too heavy for good hunting but splendid for birds and her bag showed their presence; she returned with an empty gun.

Set a few mice traps about camp.

Sept 4th 1921

Mice troubled A.M. all night long, as they seem to delight in jumping as far up on the slanting sides of her tent as they could, for the joy of sliding back down again. This was kept up by each participant until thoroughly exhausted

and proved to be anything but a lullaby for the one in the tent seeking repose.

My traps held 5 *Peromyscus* and only 2 were saved. The cony traps held a *Neotomas c.cinerea*.

I then set out to explore the country A.M. had hunted in yesterday leaving her in camp to put up the birds she had left from her hunt, yet unskinned.

I found the place even better than I had anticipated tho my success at hunting was not as good as a.m. Several good sized meadows gave promise of good trapping & the possibility of catching White Mt. Shrews a very desired animal.

The Pinyons and Junipers came down to the canyon floor and in the forest the side hill Nuthatches and Pinyon Jays were heard, scolding in a garrulous manner, while eating Pinyon nuts of which there was a fair crop. I saw my first White-breasted Woodpecker alive and I set out in hot pursuit. I fired 2 long range shots with the 12 gauge but only made the bird wilder & was not successful in killing it.

Near the large meadow I chanced to see a Hermit Thrush flit into a dense thicket but did not see it again tho I scanned the place carefully. I arrived in camp about 2 p.m. tired out after having collected a fair bunch of birds for my efforts - 3 Lead-colored Bushtits, one Leuterent Warbler. 1 Mountain Chickadee, one Woodhouse Jay, one Empidonax, one Green-tailed Towhee and a Western Tanager.

In the afternoon late a Dodge car with 3 men hunting came in and they said they came up without much trouble but a couple of steep switches below would block a loaded car. So I am going to Laws after the Ford at the first opportunity as I wish to be thru with the Mexican packer who is now using every means of extorting money from me.

Sept 5th 1921

The day was exceptionally windy but we went out hunting anyway. While I was looking at my cony traps which were empty a Nuthatch was seen by A.M. feeding up the face of a cliff in front of camp. After a short chase she collected it. Surely seems odd to think of a bird of this species going up a rock wall as tho it were a tree.

Our hunt was not marked by an abundance owing to the wind but A.M. killed another Nuthatch, a Fox Sparrow & a Hermit Thrush, while I collected 2 Fox Sparrows, an Empidonax, a Talmin Warbler & an Alaskan Warbler.

My day was so short that I took one of A.M.'s Nuthatches.

Several hunting parties came in & I might chance to get a ride out with some of them.

The cowboy who takes care of the stock here came in and proved to be very pleasant, offering to ride down and help me with the patches which make the road hard to negotiate when I bring in the Ford.

Sept 6th 1921

I did not go far from camp today as last night I had the promise of a ride to Laws with the hunters & the starting time was uncertain. I watched a couple of cony colonies near camp, collecting 2 of the inhabitants. This morning my Schyler traps held a Neotomas c. cinerea. A.M. went hunting a short distance down the creek coming back after an hour or so with a White-breasted Woodpecker & a Rock Wren.

Sept 7th

I was given passage to Laws perched on top of a pack on a pack horse. It proved anything but comfortable.

Very few birds were noted enroute - Brewer Sparrows were still residing in the sage area above timber line and in the Pinyon belt on the west slope of the Mts. several Clark Crows & a single Nuthatch was seen.

I reached Bishop about 3 p.m. tired out.

Sept 8th 1921

Left Bishop with the Ford about 1:30 p.m. bound for Roberts Ranch via Big Pine & Westgard Pass.

The east slope of the pass proved rough going owing to a recent cloudburst which had taken out 3 or 4 miles of the road, leaving nothing but a rocky creek bed to be traveled.

Wyman Creek proved hard going and tho I made it with an empty car, it took every bit of power the Ford possessed. In one place I had to apply pressure to the gas tank, which, tho having seven gallons would not flow to the carburetor.

High rocks in the center of the road proved a menace as being wide open in low gear and daring not to stop, the hills were so steep, I had to run over them with the wheels, letting the rocks crash against the running boards as the front wheels passed over.

I arrived at camp about 7:30 to find A.M. had a good

supper ready. She had been hunting during the day & killed a Western Kingbird, a Nuthatch & a Mt. Bluebird. Near the meadow a cony was heard "cheeking" in the rocks & it too was shot. A meadow Lark was seen just below camp.

Sept 9th

As the water had almost disappeared it was decided that camp should be moved, so after selecting the place a few rods above the old Roberts Ranch building, operations commenced and the day was thus spent. In the evening I set my string of mouse traps thru the meadow.

Sept 10th 1921

My traps held a single Microtus and 17 Peromyscus m. sonoriensis of which only 2 were saved. These mice are extremely abundant here as at the camp above they troubled A.M. by jumping on the sides of her tent keeping her awake while camping up there. I set 18 mouse traps about the 7x7 Miners tent and in one night, 11 Peromyscus were caught. No night during the short stay there was less than 6 taken.

Went hunting this morning and near the meadow on the road I killed a cottontail rabbit.

We went up a canyon into the Pinyon & juniper forest but found very few birds.

A.M. shot a Cassins Vireo & a Blue-fronted Jay while I killed a Wood Pewee, a Cassins Vireo, a Black-throated Gray Towhee & Lutescent Warbler.

I set traps again in the meadow this evening and after an early supper went down by the cabins to shoot bats. Several were seen flying but in the narrow canyon the light was so poor that I could not catch clear view of them long enough for a steady aim and tho I shot several times no specimens were collected.

Sept 11th 1921

My traps held a bunch of Peromyscus & 2 Microtus. We went hunting about the meadow but found birds scarce and killed everything in sight. Only 4 birds were taken and I put them all up as I had very little for the day, 1 Passerella, 1 chickadee, 1 blue-throated gray Warbler & 1 Lutescent Warbler.

In the evening I again tried to shoot bats and while walking down the road toward the meadow a rabbit was noticed sitting in the shelter of a small bush. It was stalked & collected. Three others were seen & 2 of which were collected.

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I was surprised to find one of them a ♀ in a state of lactation and judging from the size of the mammal the young were still very small. A rather late date for young at this altitude or perhaps a second or third brood!

Shot at bats again but unsuccessful.

Sept 12th 1921

Busy with my rabbits. A.M. shot 2 conies from a rock slide near camp. Hunting was impossible as wind blew violently all day & I had to stake the tent for and aft from the ridgepole as one gust would blow up canyon & the next down, taking every movable thing in its path.

Sept 13th 1921

I took the Ford driving down the canyon about 2 miles to an altitude of 7500. There I hoped to find hunting more profitable. I searched thru the dense tangle along the stream course seeing but 3 birds - a robin, a spotted towhee & a small Flycatcher. The Towhee flushed from a damp spot by the roadside and made its escape in a dense rose tangle tho pursued desperately. The Pinyon forest proved a better hunting ground and several birds were taken, 1 Nut-hatch, 1 Woodhouse Jay, 1 Brewer Sparrow, 1 Talmie Warbler & 2 Green-tailed Towhees.

Clark Nutcrackers were everywhere but as usual - shy & too wary for a shot.

A.M. not feeling well stayed in camp & had fair luck killing a Fox Sparrow & a Green-tailed Towhee near the spring when after a bucket of water, and a Nuthatch that persisted in scolding while climbing up and down a telegraph pole nearby. Probably in a fit of temper at finding no dainty tid-bits on the pole.

In the evening I chose another vantage point to shoot from & had better success, getting 2 bats.

Sept 14th 1921

Hoping to have better chances I took A.M. down where I had hunted yesterday thinking that if any birds were active in the willows she might hear them.

There seemed to be very little bird life and but few were taken. I collected 1 Spotted Towhee, 1 Sharp-skinned Hawk & one Empidonax while A.M. took a Lewis Woodpecker & a Spotted Towhee.

There seems to be no bird life left here & the trapping only results in the killing of a host of Peromyscus m.

sonoriensis which are not wanted or not saved so it was decided to move on to the mouth of Wyman Creek Canyon where atleast good mammal trapping should prevail.

Sept 15th

While eating breakfast A.M. saw a tiny rabbit in the willows & collected it.

Packed up & left A.M. the shot gun while I run the Ford and 3 birds were taken at different places going down - a Spotted Towhee at about 8000 ft alt., a Fox Sparrow at about 7000 & a Bushtit at about 6500.

She demonstrated her ability of hearing where the Bush-tits were heard while the Ford was running . Camp was located near the mouth of the canyon and where Wyman Creek is joined by Crooked Creek. Wyman Creek is heavily overgrown with thickets of willow and the sage brush living near the creek and benefitting by its moisture, has attained enormous size , some bushes being about 12 ft. tall.

Crooked Creek presented itself with the same aspect as when I saw it, high up in the mountains, a barren, rocky watercourse, with not a shrub of any sort to shade it or impede its swift turns.

The mountains all about were of rocky barren type with a scattering growth of desert vegetation growing amongst the boulders, tho sage did not extend to the hillsides it grew abundantly on the more level sloping plain below and along the water courses.

Pinyon Pines could be seen on the summits of the higher hills which marked the lowest limit of its growth. This Pine seems to be the only living thing on the White Mts. that stays within its bounds even tho it girdles the whole range. Traps were set down the sloping plain and near the rocky hills which bound the northern end of Deep Spring Valley.

In one place I san about 6 traps over a small rocky promontory which jutted out from the hill about the main line, paralleled the hills at a distance of about 100 yards.

I had two objects in view by doing this - 1st I was aware of certain species of mice which inhabited these rocky hills and I wished to find whether they strayed out from their habitat, how far, if they did & 2nd whether pocket rats lived this close to the rocky hills. The place looked favorable for their inhabitation tho no sign was seen.



Sept 16th

My traps were a disappointment tho I had solved one problem to my satisfaction. The 6 traps set over the rocky hill held 3 *Peromyscus e. eremias* and the species was not taken in any other part of the trap line tho it paralleled the hills for a mile & a half. The rest of the line, about 70 traps, held just 3 specimens, 2 *Oryzomys* & a *Peromyscus m. sonoriensis*.

The latter are certainly not as abundant here as in the mountains for out of 70 traps set out there tho the rocks & sage - at least 50 mice would have been taken, all P.m. *sonoriensis*.

Aunt May went hunting up the creek, returning after a 3 hour walk with but 3 birds, a Song Sparrow, a Fox Sparrow & a Cassin's Vireo. The latter, so badly shot up that it was not saved. She reported a dearth of bird life which was a shock to me as I had hoped she could find enough birds to keep busy while I put in a week or so on the mammals.

During the afternoon she heard the chir of an *Ammodramus* near camp and a little later caught a fleeing glance of the little animal as it fled from its vantage point on a large boulder.

Traps were set up and over a rocky hill north of camp.

Numerous small bats were seen at sundown but all very high & could not be collected.

Sept 17th 1921

My traps held 1 *Perognathus p. magruderii* and 7 *Peromyscus e. eremicus*.

The *Perognathus* came as a pleasant surprise as it was taken on a rocky brushless hillside, surely a place you would least expect to find a *Perognathus* of this silky species! It also marked a new subspecies for the collection and the one to complete the list for Calif.

After breakfast A.M. again tried her luck at hunting. This time she went farther up the canyon in hopes of finding a better hunting ground.

Three birds again proved her limit but the quality was fine - a fine adult specimen of each Desert Wren & Spotted Towhee and an immature *Empidonax*. The latter appeared to be only a bare nestling, having a very short tail, but this seems hardly possible at this late season so I surmise the young bird lost its tail tho mishap & is just growing another.

About 10:30 this morning a violent wind sprung up from the north and threatened to blow away everything in camp. Odd

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enough with its terrific velocity, it did not blow either up or down canyon but directly across canyon and the valley floor suffered its ravages as well as the hilltops. Soon the sky was heavily overcast and by 2 p.m. rain was expected at any moment, tho the wind had not abated. Tents were pitched adn everything made ready for the storm. According to residents of this country, rain never follows high wind nor does it even rain much where wind blows, no matter how slightly. I remembered this rule but the clouds certainly looked the exception this afternoon.

By evening the wind had abated considerably so a line of traps was strung out thru a rocky, rising atretch of ground just east of Crooked Creek and near the base of the mts. A scattered growth of thorny brush was growing amongst the rocks.

Sept 18th 1921

The wind blew most violently during the night and I was up twice to see how the tent's fly & Ford's cover were standing the gale. The sky was still overcast but looked as tho it would ne blown away by morning as there was a large area clear in the east.

Morning broke with a dappled sky which by 8 o'clock had cleared and the wind having blown itself out, left a beautiful, balmy day it ints wake.

My traps held a fine catch considering the wind which blew a great part of the night. Seven *Peromyscus e. eremicus*, one *Omychomys*, 1 *Perognathus l. panamintus* & 1 *Perognathus p. magruderensis*.

Aunt M. went hunting up the creek and came back about 12 o'clock with a huge grin on her face & a host of birds. She had killed a Horned Owl which was perched in a small birch tree over the creek. This owl was shot at very close range, having remained on its perch when Aunt M. was approaching & she, not seeing until very near, then as the owl appeared ready to fly, she shot.

She had heard the musical trill of a Common Wren in the rocks & successfully stalked the bird, found a single Western Gnatcatcher in the sage brush and shot a W. House Wren from a rose thicket. Then as she was returning, contended with the morning's hunt, a host of Lead-colored Bushtits were noticed in the top of a willow thicket. She stayed with them until her ammunition was exhausted, several times getting 2 at one shot. 16 Bustits was the kill and visions of hard labor resulted.

I strung my traps out a little farther to the east of where I had set last night. In several places wood rat sign was noted and not having my Schylers with me, set mice traps.

Sept 19th 1921

My traps held 2 *Oryzomys*, one each of *Peromyscus* *eremicus* & *P.m. sonoriensis* and to my astonishment 3 *Neotoma i. desertorum* with perfect skulls and caught in mousetraps! These animals all had had a terrific struggle and the traps were dragged many feet from the place of setting tho a plain trail was left to trace them in the soft earth.

After finishing my skins I walked down the road about a mile hunting *Ammospermophilus*. After a couple of hours, hunting thru the brush, I killed 2 of these chipmunks and found them rare and very shy.

I kept a sharp watch for *Peromyscus* sign during the walk but very little small mammal sign was noted tho a great deal of badger dripping was seen.

About 3 p.m. I cranked up the Ford, driving over to Deep Spring Ranch for some meat & vegetables. On a telephone pole a Prairie Falcon was seen but too shy for a shot and as I opened the gate at the ranch a Lewis Woodpecker sat bobbing his head at me from a nearby fence post. It might be mentioned that their prices were exceptional and the accommodation price of gasoline was 60 cents per gallon with everything else comparable.

On the way back to camp I set my whole sack of mouse traps thru the brush on the valley floor. Very little mammal sign was noticed and a barren place it appeared to be, nothing but thorny brush and an occasional glistening cholla of the most spiny sort. I do not believe the flora of the region to have always been of the thorn bush sort for during the past half century the place has been pastured by cattle and no doubt heavily overstocked, as it is now; the animals finding no grass whatsoever resort to brush and the brush not heavily guarded by thorns is gnawed to its very stumps. Brush, grass, or any vegetation fed upon in this manner seldom gets a chance to seed therefore the thorny protected kinds seed & multiply and in time will be the only species existing in the overstocked region. This same rule will apply to the poisonous plants in the higher mountains and the years to come, the place will be uninhabitable for domestic stock.

I arrived in camp just as Aunt May was finishing her last skin. She certainly was in a nervous state, having sat under the skinning board all day long.

Sept 20th 1921

My traps held a splendid catch and it certainly seemed good to pick up a nice line of full traps after my White Mt. trap lines. The catch consisted of 7 *Omychomys*, 3 *Dipodomys panamintinus* & 4 *Peromyscus m. sonoriensis*. Two of the latter were not saved. The tails of 2 *Perognathus l. passarentamus* was found in the traps where the animals had come in wrong, getting their tails chopped off. I have certain definite ways of setting these large mouse traps for them so will watch the colonies and reset each night in hopes of getting a series.

Aunt May rode down with me and hunted back up towards Wyman Creek Canyon, she collected 5 Sage Sparrows and a single Horned Lark. She heard more larks but this was the only one seen.

Set my traps thru the same locality this evening and put out every reserve one I had, making nearly 90 traps and a line about 2 miles long. This required the enlistment of A.M. who tied "stringers".

At late dusk the voices of many Poor-wills were heard on the rocky hills about camp and tho the flashlight was quickly brought into action, not one was seen.

Sept 21st 1921

I was rewarded with another good catch this morning and was pleased to find a *Perognathus l. panamintus* in the traps set thru the colony. So light-fingered at taking bait are they that all the bait was taken and only one trap out of 15 was sprung (and it held the pocket mouse) that had been set in the colony and I had taken particular care to select my most touchy triggered traps.

The rest of the catch comprised of 4 *Omychomys*, 3 *Dipodomys panamintinus* and 7 *Peromyscus m. sonoriensis*.

I had my gun this morning and shot a couple of Jack rabbits one of which I made a skin of and the other I used to make a couple of steel trap sets in the canyon near camp.

Aunt M. went hunting up the canyon but found birds very scarce, she killed a Talmin and an Alaskan Pileolated Warbler both at close range and were not saveable, a White-crowned Sparrow and a *Passerella i. falva*.

The whole string of traps were again set out in the valley this evening.

Sept 22nd

My traps held the usual good catch consisting of 6 *Omychomys*, 4 *Dipodomys panamintinus* and 2 *Peromyscus e. eremicus*.

The latter were taken in a rocky place which probably had been washed down from the hills nearby. This is the first occurrence of this species being taken away from the hillside here, but I suppose the rocky places are "home sweet home" to them, whether on the hillside or on the level. As I was returning A.M. shot a cottontail from the machine, it proved to be an Arizonae and was saved.

Aunt M. declared today to be "wash and clean up day" so work was dispatched with accelerative speed and necessary ablutions performed.

Traps were set as usual in the valley at sunset.

Heard a chorus of several coyotes after sundown as they were starting on their nightly hunt from the canyons on western side of the valley.

Sept 23rd 1921

My traps held another good catch today. The numbers of single species was not as usual but the number of different species was exceptional, I had - 4 *Oryzomys*, 1 *Perognathus* 1. *panamintinus*, 1 *Dipodomys panamintinus*, 1 *Dipodomys* m. *merriami*, 1 *Neotoma* i. *desertorum*, 1 *Peromyscus* m. *sonoriensis* and 5 *Peromyscus* e. *eremicus*.

The *P. e. eremicus* and *Neotoma* i. *desertorum* were caught in the rocky ground.

Aunt M. went hunting up the canyon getting another Canyon Wren, a Western Warbling Vireo, a Western House Wren and a White-crowned Sparrow.

She looked at my steel traps finding them empty.

After getting up her few birds she went out of the tent where we were skinning and taking my gun and a chair & her knitting went over into the willows to knit and rest.

I was busily engaged finishing up the day's skins when the report of the 12 gauge startled me.

A White-breasted Woodpecker had alighted on a nearby telephone pole, uttering a couple of trills which her keen ears had heard and she, not being able to get within aux range of the bird had killed it with a heavy charge.

The traps were again set in the valley and in several places along the line rocky ground was encountered.

Sept 24th 1921

My traps held a fair catch - 5 *Oryzomys*, 2 *Peromyscus* m. *sonoriensis*, 3 *Peromyscus* e. *eremicus*, 2 *Dipodomys*

panamintinus, 1 Perognathus l. panamintinus & an unidentified Peromyscus.

Aunt M. did not feel well today so she did not hunt far from camp. A Spotted Towhee & a Gambel Sparrow was her kill. The latter are quite abundant having arrived from the north recently.

I changed trapping localities this evening, setting up Crooked Creek Canyon with the hopes of enlarging the series of Perognathus parvus magruderensis.

The ground chosen was over a number of benches caused by torrential floods and near the base of the mountains on either side of the creek. Here I found some sage but a greater part of the scattered brush was of the thorny variety.

Sept 25th 1921

My traps held an enormous catch - 2 Perognathus p. magruderensis, 4 Perognathus formosus, 1 Onychomys, 2 Peromyscus m. sonoriensis & a bunch of Peromyscus which I took to be P. c. stephensi being doubtful I put up the whole bunch.

Aunt M. went hunting up the creek a short distance and upon her return with a small bunch of birds, she reported a fox, caught in my lower steel trap. This completed my doom for the day - 22 small animals and a fox.

A Kingfisher was heard over camp about noon. Traps were set again in the mouth of Crooked Creek Canyon this evening.

Sept 26th 1921

My traps held a smaller catch than that of yesterday - 2 Perognathus p. magruderensis, 1 P. formosus, 6 Peromyscus m. sonoriensis and 4 of the unidentified Peromyscus.

About noon Aunt M. spied a small bat flying about camp and after a few minutes wait I captured the animal alive with the butterfly net.

About 3 p.m. we drove down to Deep Spring Ranch after mail supplies, etc. and then down to the lake in search of new trapping and camping localities.

The place was found to be almost impossible as a camping site as the odor of the sulphur and alkali springs, with the extreme heat of the sun and not a bush for shelter would make life unbearable.

I found fresh gopher work and while I was busy checking over mammal possibilities Aunt M. killed Yellow-throat and 2 Song Sparrows.

The gophers proved to be the only interesting animals about so I will drive down early some morning, setting my traps and watch them closely during the day

Sept 26th 1921

On my way back to camp I found it necessary to purchase some supplies from the ranch and I replenished my gasoline at their exorbitant price, 60 ¢ per gallon, short measure.

Sept 27th

The collecting chests being badly crowded we decided to proof read and pack all dry material so the day was thus spent.

Sept 28th 1921

Made an early start for Deep Spring Lake, where on my arrival I set the gopher traps. After getting the traps out Aunt May & I took a long hike thru the marshes & springs which border the eastern side of the lake.

Several fair-sized streams of water gushed from the foot of the mountain slope, all these streams were of more or less sulphur & alkali giving forth a nauseating odor.

A large bunch of ducks was seen swimming in a small pond. I tried to get close enough for a shot but had no cover to sneak up behind so they rose at long range. I saw Mallards, Pintails, Green-winged Teals and Blue-winged Teals plainly. A large number of Coots were also in the pond but only hydroplaned their way to the tules when I got too close.

A Virginia Rail was flushed from a little patch of tules as I jumped over a small stream and tho both Aunt May & I threw rocks into the patch in which they had taken refuge, the bird could not be flushed again.

A single immature Black-crowned Night Heron was seen near a rush bordered stream and as I approached it flew giving voice to a hoarse croak as it left the ground.

As the most western end of the marshy area was reached and this being located on the extreme southern end of the lake, a lone Black-billed Magpie flushed from the brush too far for a chance shot.

Aunt May had the only shots getting a Western Marsh Wren in the tules and a Lutescent Warbler in the brush. She saw many Gambel Sparrows in the brush bordering the marsh as she stayed on the outer edge where the ground was firmer.

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Returning I found 2 gophers caught and immediately reset the traps in new holes.

While I was skinning my gophers a small flock of red-winged blackbirds were heard and Aunt May stalked them, killing 2 immatures with a single shot.

My gopher traps held another specimen when they were picked up just before leaving.

Wishing to work the valley thoroughly I had my trap sack with me and on leaving the lake about sunset watched for favorable trapping grounds on the way to camp.

I chose a stretch of land about the center of the valley and on setting the traps became quite enthused with the sign noted - apparently that of *Microdipodops*, and the texture of this species here might reveal a new subspecies at least.

I will not be able to do much trapping here as it is about 12 miles from camp & the expense of transportation between the trapping ground and camp would be prohibitive at gasoline 60¢ per gallon.

Sept 29th 1921

My traps held a fine catch and as the sign had foretold, 3 specimens of the genus *Microdipodops*, other things taken were 3 *Oryzomys*, 1 *Perognathus l. panamintinus*, 3 *Dipodomys panamintinus*, 7 *Dipodomys m. merriami* and 6 *Peromyscus m. sonoriensis*.

Aunt M. went hunting up the creek and about camp getting but 3 birds for the morning's work. A Fox sparrow, a Spotted Towhee and a Desert Wren. Very few birds were heard or seen & she threatened to quit hunting in this vicinity as birds were too hard to find, most of their numbers having gone on.

Set my traps again in the same locality as worked last night.

Sept 30th 1921

My traps held a light catch & but one of the desired *Microdipodops*. Other things captured were 1 *Perognathus l. panamintinus*, 3 *Dipodomys panamintinus* & 2 *Dipodomys m. merriami*.

After getting up the skins I went up to look at my steel traps, finding them empty; they were brought in.

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A mountain lion had been up the road during the night and visited my upper traps but not within the dangerous zone, for he had paced to and fro at a distance of 10 ft from the set.

Started out for Oasis to get supplies & gasoline and when about there the Ford began to miss. It kept this up until she went dead and what I had finally locating the trouble in a plugged gas line.

This end of Fish Lake Valley would make a fine collecting station and many interesting animals might be found here.

Needless to say I found prices comparable to those of Deep Springs Valley and gas at the 60¢ rate.

Set my traps thru the same general locality as of the 2 previous nights, in the center of Deep Springs Valley.

Oct. 1st 1921

My traps held a good catch including 2 Microdipodops, 1 Perognathus l. panamintinus, 1 Omychomys, 4 Dipodomys panamintinus & 4 D.m. merriami & 5 Peromyscus m. sonoriensis. The latter were not saved.

After getting up my skins I went to work on the Ford trying to locate the trouble and to my astonishment found the gas tank leaking and nearly all the contents gone!

I plugged up the leak with soap & hiked out for the garage at DeepSpring Ranch. Here the mechanic's charges were notably higher than expert service in the city.

Set traps for Microdipodops again tonight. During the past few nights mice & rats have been threatening to carry away the camp so set 10 mice traps in the tent and about the stove & tables.

Oct. 2nd 1921

My traps held 1 Microdipodops, 2 Omychomys, 2 Dipodomys panamintinus & 3 D.m. merriami.

All my mice traps about camp were sprung and 4 were missing. Strange to relate is the fact that the remaining traps were empty. Many theories were suggested including skunks & woorats. The latter seemed the most feasible and tonight I shall set a bunch of Schyler's.

An (Ammospermophilus) strayed into camp during the day & was caught.

Traps were not set this evening as I intended to move camp tomorrow spending one night at the lake before leaving the valley.

Set 6 Schylers baited with dried peach in the tent.

Oct. 3rd 1921

The Schylers in the tent were completely routed and not a victim captured. On counting them 1 was missing. This trap was later found near the stream empty tho blood was to be seen on the jaws. This would indicate a small animal had been caught & later eaten out by some larger animal which had carried off rat, trap and all. Surely something larger than a wood rat was invading camp!

The weather was so threatening that I decided not to move camp today & light showers fell off & on all day.

Two Ammospermophilus were caught near camp.

At bed time I set 5 Schylers baited with bacon and shortly after everyone was in bed and I asleep of course! a yell from Aunt May in her tent aroused me from my slumber. "Get out quick a skunk". I was reluctant at first to get out of my warm bed and inclined to doubt until a waft of breeze brought the acrid odor to me. Taking the flashlight I went out to the big tent and sure enough a Spilogale was fast by the neck but not dead!!! as his hind legs were firmly on the ground, his tail erect and WOW that tent. Things were surely a mess and of the most potent nature. I finally, with the aid of a long stick, hooked on the trap and skunk, submerging them in the creek nearby until the skunk was dead & harmless.

Oct 4th 1921

The day dawned with a stormy sky and tho it promised a repetition of yesterday we decided to move after getting up my skunk I started to break camp. Meanwhile a band of Bushtits came by camp and A.M. killed 2 of them.

On commencing to pack it became necessary to take inventory of the damaged goods within the tent where the skunk had skunked it. Food suffered worst and a sack of flour was completely lost, part of a sack of potatoes & onions. Some cotton and one of my shirts which was laying on top of a box of specimens. The later I will ship on first opportunity. However, the skunk made the outgoing trip breadless & potatoless and while these things were not replaceable I was glad to lose the weight.

I finally departed in the middle of the afternoon with intentions of spending the night at Deep Spring Lake but

on reaching thr valley where a general view of the weather was available it was decided not to risk chances as heavy clouds were banking up to the south with promise of early rain so kept on toward Westgard Pass.

On reaching Cedar Flat at dusk, camp was pitched for the night and I strung out all my mouse traps thru the Pinyon, Juniper, Sage association at an altitude of 7300 ft. Here, on looking the place over I should find *Perognathus parvens magruderensis* at about the highest limit.

A Horned Owl was seen while setting traps, perched on top of a dead Pinyon near the open sage flat.

Oct 5th 1921

On picking up my traps this morning they were found to hold 2 *Peromyscus m. sonoriensis* and one *Perognathus p. magruderensis*.

After getting breakfast over and the lunch box packed, Aunt May went hunting while I put up three mice and packed the Ford.

On completing the skins and packing a lusty yell brought Aunt May in from over the hill. She had a splendid kill including one Woodhouse Jay, six Gray Titmice and two Nuthatches.

This proved too much for me and as it was only about 10 o'clock it was decided to spend another hour hunting Titmice.

I tried to learn her method of finding them but the faint call note uttered by these birds proved difficult for me to distinguish so I had to do my hunting by sight. This was extremely hard hunting owing to the shyness of the birds but I had a fair luck getting 2 Titmice, one Nuthatch, a Western Chipping Sparrow, a chipmunk and a M. Chickadee, this latter bird I shot by mistake.

Aunt May took 2 more Titmice and another Woodhouse Jay.

Pinyon Jays were everywhere flying about in large flocks and an occasional Clark Crow was seen. All of them had been feeding on the abundant crop of Pinyon nuts.

Instead of the one hour allowed for hunting two were spent and the camp was not left until noon and then only because a threatening rain.

Arriving in Owens Valley I drove up to Laws to return some ropes which the packer had loaned me. While there the storm broke amid a tremendous rush of wind turning south towards Bishop we stopped over for supper after which the storm was faced traveling into it bound for Lone Pine,

the next collecting station. We arrived there about 10 p.m. amid a torrential downpour and pulling under the shelter of a tree in a side street it was decided to spend the night sitting in the Ford so after a canvas was thrown over the whole machine we sat us up to rest. It proved anything but rest and by early morning both of us were nearly dead from gasoline fumes.

Oct 6th

After a frugal breakfast I started up the Ford and set out hunting a camp site. The desired location was found after some time and while I pitched camp Aunt May went to work on her birds. After getting up the tents I too started skinning on my chipmunk & birds killed yesterday.

The campsite chosen was about a third of a mile west of Lone Pine, up the creek and on the eastern edge of Alabama Hills. A fine stream of clear cold mountain water rushed past and its banks were bordered with a heavy growth of Birch and Lance-leaved Cottonwoods. About 4 p.m. the clouds having again settled, the landscape was shrouded in a heavy drizzle and we sought the shelter of the tents.

No traps were set this evening owing to the rain.

Oct 7th 1921

Dawn broke with a stormy sky and a brilliant glowing sunrise too beautiful for words. Snow clouds enveloped the higher mountains on either side of the valley, tho by ten o'clock they were being whipped to pieces by a very high westerly wind, which was racing over the peaks. This wind did not affect the valley below which after the clouds had been blown to the eastward, was bathed by radiant warm sunshine all afternoon.

After the mountains had been cleared of clouds by the wind, they presented a most picturesque scene, as snow had fallen almost to their very bases and gleaned in the bright sunlight.

I set my whole line of traps along the base of the hills north of camp. The place did not appear to be well inhabited by small mammals but I hope to get what *Dipodomys* I need in several nights' trapping.

Oct 8th 1921

My catch was beyond expectation and a good day's work was the result. Six *Dipodomys myops*, 6 *Dipodomys m. merriami*, one *Peromyscus e. eremicus* and one *P. m. sonoriensis*.

Aunt May looked about for birds but found the place absolutely void of bird life.

Set my traps again in the same locality - as trapped in last night.

Oct 9th

My traps held 7 of the desired *Dipodomys* - one *Oryzomys* and one *Dipodomys m. merriami*. About 9 o'clock Aunt May heard the plaintive notes of a Song Sparrow in the brush near the creek and set out in pursuit of the bird. She searched the thickets carefully and returning about an hour later had collected 2 Song Sparrows and a Desert Wren.

Numbers of Gambel Sparrows were noted today, having moved in during the night.

Set my traps again this evening in the same general locality.

Oct 10th 1921

My traps held 9 *Dipodomys* of the 5-toed group, 3 *Dipodomys m. merriami* and 2 *Peromyscus e. eremicus*. On looking over the *Dipodomys* (5-toed) I find that more than one species is being caught so will not endeavor to name them.

Aunt May searched for birds this morning but had no success and says she is just going to keep her ears open and collect in the vicinity of camp.

Put out my mice traps as usual.

Oct 11th

The traps held an excellent catch 9 *Dipodomys*, 2 *Dipodomys m. merriami* and one each of *Peromyscus e. eremicus* and *P. m. sonoriensis*.

Aunt May heard a Song Sparrow near camp and on searching the thickets nearby killed it and a Western Marsh Wren.

Set my traps out again after *Dipodomys*.

Oct 12th 1921

My traps held 7 *Dipodomys* (5-toed group) and one *Ammospermophilus l. leucurus*. This latter animal's capture proved interesting. It was taken in almost the last trap of the line and this trap was set when almost dark last night. The moon which was not quite full did not rise until about 7 o'clock and as I picked up my traps this morning, before

sunrise, I found the animal was stiff and stark so must have been active in the bright moon light during the night.

Day rather windy and no birds were about.

I set my traps south of camp this evening.

Oct 13th 1921

My traps held 8 *Dipodomys m. merriami* of which I saved but 7. After getting my skins up I went out in search of Meadow Mice. I found them very scarce, in fact, I did not locate a single place where I felt sure they were active. An alfalfa patch was noted to be well burrowed with gophers and shall get my traps started on them.

I set my moice traps thru the weed and grassy patches along the stream tho no good meadow mice runways were noted.

Oct 14th

My traps held 4 *Peromyscus m. sonoriensis* which were not saved.

After breakfast I took my gopher traps, setting them in the alfalfa patch.

I looked them over about noon but apparently these animals are not active at this season during the daytime and the traps were still empty.

I scouted about after looking at my gopher traps and spotted a good looking tule marsh of about an acre in size.

My gopher traps still empty and the gopher holes still open when looked at this evening.

I set about 50 mice traps thru the tule swamps for *Microtus*. On careful search thru the place I have but little hopes of catching many Meadow Mice here as the mud and water is nearly knee deep making it almost uninhabitable for these animals.

Oct 15th 1921

My mice traps held a single *Microtus c. vallicala* and several traps set about camp captured a *Peromyscus e. eremicus*. The gopher traps held 2 specimens and I reset the spring traps.

A small bunch of quail came near camp and Aunt May took a pot shot with the 410 killing 3. They were taken so well that she made skins of them.

I looked my gopher traps over again at noon but found them empty.

Set the mouse traps thru the tule swamp again this evening.

Oct 16th

My mouse traps empty so left them out during the day in hopes of the *Microtus* being active.

The gopher traps held but a single <sup>A</sup>gopher so pikced them all up, setting again in a better place.

During the day I found my mice traps untouched tho they were looked over twice.

I will leave them out tonight at this location and then try another I have in view.

Oct 17th 1921

The Meadow mice traps empty so picked them all up. My gopher traps held 3 gophers.

Spent part of the day going over the mouse traps adjusting them and the ones that had been set in the swamp had to be dried. Watching them as they were drying to keep them from curling.

A very large bunch of Cedar Waxwings lit on the top of a nearby cottonwood tree where Aunt May shot at them, killing only one.

Set my traps ina new location this afternoon and tho there was but a small area I found very fresh signs and hope to catch a small series.

Oct 18th

The *Microtus* traps held one specimen and the traps were left out. The gopher traps held 3 animals and the whole string of traps were reset in new places.

I looked over my mice traps about 3 o'clock and pleased to find another adult *Microtus*.

Oct 19th

My Meadow Mice traps empty butleft them in the same place as the night had been very cool and had probably curtailed their activities. The gopher traps did well catching six animals. I again reset them all in new places.

About noon Aunt May heard the scolding of a wren near

camp and while out hunting it, killed a Spotted Towhee. The wren returned later in the afternoon and was collected.

A change in the weather seems apparent as high clouds are in evidence and lots of Gambel Sparrows are about.

I looked at the mice traps about sundown finding them empty.

Oct 20th 1921

Another Meadow Mouse was caught during the night and three gophers were in my traps.

I picked up the meadow mice traps so they could be dried out and another bunch set.

Aunt May heard a Spotted Towhee nearby and making a survey of the thickets killed two. They must be on their southward journey as it has only been the last two days that these birds have been about here.

Set my mice traps in a new location this evening but don't think much of the place.

Oct 21st 1921

My mice traps held a single Harvest Mouse so all the traps were picked up and I will set them in the old place again tonight.

The gopher traps held 4 gophers making a total series of 23 specimens. Had the Meadow Mice been abundant I would now be ready for Keeler, Inyo Co., where I intend to spend a few collecting days.

Aunt May killed two more Towhees today and saw several more, tho they were so shy she could not stalk them.

Set all my mice traps in the small area this evening. The bunch of traps certainly will cause the meadow mice to be cautious if they escape!

A most violent wind started up during the night and made life miserable for me as my bed was in the open and not sheltered. I was up many times retrieving articles which the wind would blow out of camp - and amongst these was the cotton sack, pot lids, stove pipe etc.

Oct 22nd 1921

Wind blowing terribly and about 8 o'clock became so violent that both tents went over about the same time. What a scramble followed trying to save the stuff. After getting



it all stored in the Ford and the tarp securely tied down Aunt May and I took refuge in a dry irrigation ditch nearby. Here the stove was set up and a frugal breakfast cooked.

I looked over my mice traps finding two *Microtus* and 3 Harvest Mice. These specimens were put up with considerable difficulty owing to the wind.

I left the traps set in the same locality. No gophers were collected as my traps ate now all in.

Oct. 23 rd 1921

Spent a miserable night as the wind turned bitter cold and the tents for protection could not be pitched to stay as the rocky ground prohibited the use of deeply driven pegs.

My traps held three *Microtus* and a single Harvest mouse. Picked up the traps and am planning on going to Keeler as soon as this wind abates.

Oct 24th

The wind subsided during the night and the sun rose with a clear sky. The High Mountains on either side of the valley had a good mantle of snow on the crests but not a drop of rain or snow had fallen in the valley which at this point is less than 15 miles wide. An interesting phenomenon was the fact that the sky directly over the valley always stayed clear while storm clouds completely enshrouded the mountains on the east & west. This was probably due to air currents but what wouldn't be clear with such currents!

Spent the day proofing & packing to make ready for the next collecting locality.

Oct 25th

Packed up and left about 2 p.m. bound for Keeler, the next collecting station.

When about halfway over there the timer wires on the Ford became tangled with the cooling fan breaking them off from the timer. This caused considerable delay and tho I patched them up as best as I could the old Ford sputtered and missed all the rest of the way.

I arrived in Keeler about sundown and purchased a new set of timer wires & had them installed the first thing. Temporary camp was located about a third of a mile south of Keeler and near a small spring of sulphur water. All my mouse traps were strung out in a straight line from near the old lake shore to a point in a wash near the base of the first hills.

Oct 26th 1921

My mouse traps were a total failure as the first 6 traps held the only animals caught - 1 *Dipodomys deserti* & 1 *Dipodomys m. merriami*. The rest of the line was as I had set them last night.

I had a chance this morning to look the country over with a critical eye. The place proved to be one of the most desolate, wasted stretches I have ever seen. Apparently the only bit of the territory inhabited by small mammals is the narrow strip of aeolian sand which parallels the old lake shore some hundred yards back. Here I found a little sign of *Dipodomys deserti* & *Dipo. m. merriami*. The only nocturnal animals at this season were *Ammospermophilus l. leucurus* and a very few rabbits constituted the inhabitants of the place during the daylight. Close to the immediate shore where once the water of Owens Lake had rippled, a belt of Bermuda grass was growing wherever favorable soil or sand existed and in this association a fair quantity of gopher diggings were noted.

Owing to the fact that all the available water through the upper valley above the lake has been diverted into the Los Angeles Aquaduct, draining Owens river, which before this event was a stream of considerable volume, the lake is gradually drying up. The edge of the water that once was but a very short distance from Keeler, is now over 5 miles away and rapidly increasing the distance,

This receding of the lake is soon to cause hardship on the numbers of soda works which are operating about its shore as the operating costs increase with the shrinkage of the lake.

The dried lake bottom is white like a blanket of snow and the odor arising from it is of the most vile nature reminding me of a stagnant decaying salt marsh.

About noon I heard a swish of wings as a Prairie Falcon darted close overhead towards the lake in search of prey.

Aunt May shot three sage sparrows and a Nevada Red-winged Blackbird as they came to drink from the small sulphur spring near camp.

I set all my traps thru the sandy stretch about  $1\frac{1}{2}$  miles north of Keeler this evening. The place appears to be anything, but a likely habitat for *Onychomys* and I have my doubts whether this species was ever taken within several miles of Keeler.

Oct 27th 1921

My traps held 4 *Dipodomys m. merriami* and 1 *Dipo. deserti*. The *D. m. merriami* gave decided evidence of the chemical effect that the alkaline has on the pelage as a specimen with partly fresh hair looks like *merriami* from another place. No doubt *Oryzomys t. clams* is but an alkalized species, and synonymous under one of the *O. torridus* subspecies.

I set all my gopher traps just north of town and during the day 4 specimens were caught.

An interesting observation was made in camp today when a robin tried to light on a wire of a high voltage power line which passed near camp. The bird tried several times but never once touched its feet to the wire. I do not know how high the voltage the line carried but the incident reminded me of a similar observation I made in Silver Canyon on Sept. 7th when riding out of the White Mts. on the pack-horse. A Western Tanager was flushed from a small bush near the road & tried to light on the aluminum line carrying 50000 volts, it never succeeded in making a landing but attempted it about 30 times at 10 ft intervals. So persistent was the attempt by the bird that 2 companions and myself stopped our horses and watched the bird for about 2 minutes as it hovered, never getting within 3 inches of the wire. Finally it flew to a small bush on the hillside where it succeeded to rest its weary wings. It must be possible for the birds to feel the current in the wire before lighting as I have never seen a bird, not even a shrike, perch on these high voltage lines, either on the copper or aluminum.

Set all my traps thru the sand dunes just north of Keeler. I noted more sign here than at either of the two previous trapping places and the sandy strip at this point was much wider.

Oct 28th 1921

My traps held four *Dipodomys deserti* & five *Dipodomys m. merriami*. *Dipo. deserti* holes were everywhere and a great number of my traps were sprung by this large Kangaroo Rat. Set my traps again in the same locality.

Oct 29th

My traps held a very light catch - three *Dipodomys m. merriami*, one *Reithrodontomys m. megalotus* & one *Peromyscus m. sonoriensis*.

A large bunch of my traps were sprung by *Dipo. deserti* but unfortunately none of the animals were caught.

After breakfast I set all of my gopher traps just north of the town again. The sign did not look very fresh today but by considerable digging I managed to find used runways.

I looked the gopher traps over after lunch & found one animal captured.

Aunt May shot 2 birds that came to the spring for water, one was a yellowish linnet and the other a ♀ Horned Lark.

In the afternoon I drove over to Lone Pine after some supplies and to purchase more gopher traps getting back too late to set my mice traps.

Oct 30th 1921

My gopher traps all empty this morning so picked them up and reset with the new ones purchased yesterday. Watched them carefully all day catching five gophers.

About 3 p.m. Aunt May & I covered up everything in camp and drove down about 5 miles south of Keeler looking for good trapping grounds where Onychomys might be taken. No favorable locality for any small mammal was found so I set all my traps thru the sandy stretch where I had trapped on the 28th. Several Schylers were rigged up and set in the dipodomys colonies.

Returning to camp about dusk I found the burros had robbed camp. everything they could find they knocked lid off my utilities box & the paper boxes off gun shells but the worst loss was the typewritten list of Calif. mammals which was partly devoured by a young burro. A prospector living nearby saved the camp from total distruction by his early arrival home.

~~Set all my traps thru the sandy stretch where I had trapped on the 28th. Several Schylers were rigged up and set in the~~

Oct 31st 1921

My traps held one Dipodomys m. merriam, one Reithrodontomys m. megalotus & three Dipodomys deserti. During the day three gophers were taken.

Not finding signs of Onychomys during the past several nights of trapping I determined to use mu uppermost skill in locating them and set out to to hunt for them with the Ford after late lunch. Driving north I kept going until I reached the northern shore of the lake. There I found some very fair localities tho they were only in the shape of isolated spots & not likely to have an abundance. The traps were strung out. This place will be known as "Six miles north-west of Keeler at 3650".

Nov 1st 1921

My traps held a splendid catch including one of the desired Onychomys which proved to my satisfaction that I could successfully read signs of them.

Other things taken were three *Dipodomys deserti*, one *Dipodomys myops* and seven *Dipodomys m. merriami*.

*Dipodomys deserti* were everywhere & at least half of my traps were sprung by them.

About 10 o'clock Aunt May saw a queer bird come to the spring & collected it. On close examination I believe it to be a *Melospiza Georgiana* Swamp Sparrow, and the third state record for her this season.

I picked up my gopher traps which held three more gophers. Mouse traps were again set in the same general locality as last night.

Nov 2nd 1921

My traps held another *Onychomys*, four *Dipodomys deserti* and six *Dipodomys m. merriami*.

A prospector dropped into camp this morning having just arrived from the Death valley - Panamint region. He gave me a very graphic description of the country and illustrated it with a number of photographs. Almost the whole forenoon was thus employed & I had to rush my work in order to get out my traps. They were set again thru the same general locality as on the previous nights.

Nov 3rd

My traps held a splendid catch - 6 *Dipodomys deserti*, one *Onychomys*, 4 *Dipodomys myops* & 3 *Dipodomys m. merriami*. This made an extremely long day's work as the coming and going from the trapping grounds (2 round trips of 16 miles each, daily) takes about 2 hours of the now short days leaving but about seven hours in which to have two meals, write notes & get up the skins.

About 3 p.m. the sky took on a stormy cast, giving warning of an approaching rain.

Traps were again set in the same locality.

Nov 4th

My traps held 2 *Onychomys*, two *Dipodomys deserti*, three *Dipodomys myops* and four *Dipodomys m. merriami*.

The day was most miserably cold as a thin blanket of clouds overcast the sky keeping out the warm rays of the sun.

The prospector spent part of the day in my camp telling interesting stories of his Alaskan and desert experiences.

Traps were again set this evening thru the same general locality.

Several additional bunches of burros were turned lose about Keeler today as new prospectors came in seeking shelter for the winter. This brings the grand total of "camp robbers" up to about 50 and constant guard has to be kept, night & day.

Nov 5th 1921

The night was bitter cold and I put in one of the most miserable rests in my camping experience.

The trap line also showed the cold weather's effects as only six animals were taken, two *Dipodomys deserti*, two *Dipodomys myops* & two *Dipodomys m. merriami*.

The locality in which trapping operations have been persued during the past 5 days shows every indication of being heavily populated by *Perognathus*, but so far none have been taken. This is dues to the fact that they hybernate a greater portion of the cold season. I noticed while trapping in Deep Springs Valley during the latter part of September that on chilly nights the activity of *Perognathus* did not exist, tho after a fairly warm day I could almost count on a specimen or so.

I put the Ford in the shop today so it could be put in shape for the Walker Pass region. No traps were set this evening as I wish to proof read & pack specimens tomorrow.

Nov 6th

Proofread & packed specimens, set 4 gopher traps near camp and on picking them up this eveing found a nice gopher had been caught.

Nov 7th

Packed up and moved to the next collecting station - Olancho , Inyo Co. Calif. alt. 3600.

Temporary camp was situated near the school house and traps were strung out towards the south.

Large bands of sheep had been driven over the area obliterating all small mammal signs, so the line was set at random.

Nov 8th 1921

The night was uncomfortably cold and a heavy coating of ice covered the water bucket.

My traps held five *Dipodomys m. merriami*, one *Dipodomys myops*, one *Dipodomys leucogemys* and an *Onychomys* - a fair catch for such cold weather!

Olancho is situated about a mile and a half southwest of the old shore of Owens lake and is just on the outside edge of the area affected by its alkaline waters. This gives the region great variation in both vegetation and mammals. To the west the Sierra Nevada rises abruptly from the valley reaching its highest point at Olancho Peak, while the Coso Range on the east consists of a low, barren desert range whose western slope, visible from the valley, appears destitute of trees. On the eastside of the valley and not over a mile from the town, a large area of arolean sand exists, its dunes shifting with each violent wind storm. Here the usual sand inhabiting animals should be found such as *Dipodomys deserti* and *Dipodomys m. merriami*.

An intermediate strip of ground perhaps half a mile wide and somewhat lower than either the sandy stretch or the brushy area, extends south from the lakeshore for some distance. This is the part directly affected by the alkali and plainly shows it by the vegetation which is mainly a rank species of wire or Bermuda grass. A lone house, now deserted, stands in this association, surrounded by what has been a fair sized patch of alfalfa, but now both fields and buildings are in a state of decadence. I was fortunate in locating the lessee of the premises and securing the use of the house for a short period.

Water for camp was obtained from an artesian well near the house. The flow was very small, however, ample for the requirements. Numerous fresh gopher mounds were noted in the alfalfa fields and I shall trap for them before leaving.

These fields are gnawed to their very roots by a band of roving donkeys which seem able to get thru the barbed wire fences with great ability, the loss of hide from their backs or legs notwithstanding.

An acre or so on the north side of the house had been fenced for a garden plot. This area was completely surrounded by a wind break composed of small willow sticks about six feet long woven in an upright position. The house also had a protection against the wind. While it was only a three roomed California bungalow, it had ten twisted wire braces, reaching from firm points on the roof to securely anchored positions in a concrete boulder foundation which must have been very heavy owing to its height & width. The trees planted about the place all had a tilt towards the north. The whole aspect of the place indicated the frequent occurrence of violent wind storms.

The grees in all the remaining country, tho not a great number, were in a state of golden beauty, having been nipped by recent frosts.

Traps were set south of camp thru the brushy area.

Nov. 9th 1921

The night proved to be another of the still, cold, windless ones which according to the natives are of seldom occurrence at this season in this locality. And my traps held a catch in accordance to the cold westher consisting of two *Dipodomys m. merriami* and one *Dipodomys myops*.

I set a half dozen gopher traps in the alfalfa patch but caught no gophers during the day.

It was expected that numbers of birds would water at the small reservoir during the warmer part of the day but none excepting a half dozen linnets, which inhabited the trees hereabouts, were seen. All of the desert migrants must have passed along, tho this oasis must certainly have been abundantly visited during the Fall.

Traps were agin set thru the brushy region this evening.

Nov 10th 1921

The mouse traps did but little better than last night, catching one *Onychomys*, two *Dipodomys m. merriami* and one *Dipodomys myops*.

The gopher traps helped to fill in the day with 3 nice adult dpecimens. I was greatly surprised to find three *Thomomys p. perpes* as I had expected the alkali association to certainly extend the range of *T. meracinus* to this vicinity. Traps were set again in the brushy region, tho towards the end of the line I skirted the edge of the alkali grass

Nov 11th

The night very cold and to add to the discomfort, it was made hideous by the band of braying asses whose discordant call notes sounded at intervals thru the night, aroused me with many sudden starts from my restful slumber. Certainly, the shot gun shall be brought into action if they chose to serenade again with such persistence.

The mouse traps held 5 *Dipodomys* (five toed group) and one *Dipodomys m. merriami*. The part of the trap line extending into the alkali grass was undisturbed indicating that that association is not inhabited by small animals.



Traps were set thru the brushy region again and a reconnaissance thru the sand hill area revealed the presence of large numbers of *Dipodomys deserti*. Four Schyler traps were set thru the good locations.

Nov 12th 1921

My Schyler held a single *Dipodomys deserti* and the line of mouse traps were absolutely untouched, not even a single trap was sprung. This was due to the extremely cold night.

After getting up my *Dipodomys* skin Aunt May & I went out to the *Dipodomys deserti* colonies where we tried to dig out some live ones.

Four colonies were dug out tho in each case the nests where the animals were reposing must have been missed.

The kind of soil chosen by them for their burrows is very sandy on top but with a former strata or subsoil underneath. In one of the burrows I went down about 4 ft following a hole. At this depth the sandy soil was quite moist, however, the burrows must have been in the course of construction as no grasses or seed stores were found & the end of the hole did not have the usual enlarged space.

In another of the holes examined we dug about 30 ft into the sand dune. Work here was exceptionally difficult owing to the constant flow of sand sifting into the excavation. This burrow had three outlets and I surely thought a *Dipodomys* would be uncovered - but we had no luck. At the extreme end of the tunnel an enlarged space perhaps 8 or 10 inches in diameter, was found. This place had a scanty deposit of grass stems, chewed into shreds, apparently work done in the spring time.

These animals do not seem to hoard much food as only occasionally a small deposit was found and then just at random on the floor of the main burrow. Manure seems to be a favorite with them and on two or three places in a single burrow a large round solid piece of horse dung was well down into a branch of the tunnel, undoubtedly dragged there by the *Dipos*. Sheep manure was stored whenever obtainable and in several places where a scanty cache of seeds was found, numbers of sheep droppings were present, each with a small nibble taken from the side where the *Dipodomys* had tested the quality.

These animals do not seem to have a separate place for a toilet as do gophers and woodrats but leave their excrement wherever the occasion demands.

In the late afternoon I walked a few hundred yards north of the camp finding several colonies of *Dipodomys* and traps were set there later in the evening. Set twelve Schylers in the *Dipodomys deserti* colony.

Nov 13th 1921

My *Dipodomys deserti* traps held four specimens and the mouse traps held two *Dipodomys bucogemys*, These latter animals represented the first species to be taken in the alkali association and close examination showed thr alkali stain on their pelage. I set my gopher traps again today and as last taime, no acrivity was shown by them in the daytime.

The mouse traps were set in the alkali association again this evening.

Nov 14th

My *Dipodomys* traps held two more specimens and the gopher traps two gophers.

A violent wind started up about noon and was still raging at sundown so no traps were set.

Nov 15th

The night was bitter cold and the wind blew constantly. The gopher traps held a single specimen which was the only skin for the day.

Wandering about trying to keep war, I noticed numbers of dead jack rabbits laying about. They were dried up but in a good state of preservation and must have died in the early fall from the plague which gradually worked its ravages down the valley thru the summer. It also called to mind the fact that I haven't seen a jack rabbit in this vicinity during my stay.

The wind slackened up about sundown and I strung out my traps north of camp.

Nov 16th

About 10 o'clock last night the wind arose with increased violence. The old house rocked and creaked keeping me awake with the fear that possibly the shack would collapse.

My traps were a riot and only 2 specimens were taken, a 5-toed *Dipodomys* and a *Perognathus m. sonoriensis*.

After getting up the two skins I drove over to Dawson which is about 30 miles east of here and the last town before the Panamint Mts. are reached.

I was seeking information in regards to the accessibility of the Panamints by auto. The route lay thru a waterless desert region and was an ideal locality for Ammospermophilus but on the whole trip I saw only one.

In a wash, thru which the runoff from a cloud burst had rushed during the summer, a beautiful luxuriant growth of Desert Holly was noted and a nice bunch picked.

Dawson is certainly the "end of the trail" as not a tree was growing in the community which was situated on the south slope of a bare desert mountain.

After getting such directions as were available I returned via Keeler and Lone Pine purchasing some supplies at the latter place.

About 3 p.m. the wind changed from south to north and a more cold black gale I had never before encountered. By the time camp was reached the storm was raging and large banks of clouds were coming in from the north, leaving a mantle of snow on the higher mountains as they came.

No traps were set this evening as the effort would be useless owing to the wind.

November 17th 1921

The wind blew terrifically all night long and all during the day, keeping me indoors. The few specimens were proof-read and all the dry skins packed in the already partly filled box.

About sundown the wind abated and I strung out about 50 traps.

Nov 18th

Last night was the coldest night yet- the water bucket in the house froze and when I was up after the mail I learned that at 7:30 this morning the thermometer had registered 29° and at noon only 41°.

My traps held a single Harvest mouse with a crushed skull. Wishing to know exactly how many traps I had out I counted them finding 58 had been set last night.

I received the long overdue orders and started to pack up.

Nov 19th

Just before bedtime last night something was heard thumping about on the front porch so set a couple of mouse traps. This morning my traps held a Dipodomys, undoubtedly the cause of the noise heard last evening. The specimen was

frozen solid and I could not extricate it from the trap so put trap & all in the collecting chest & shall skin at my first opportunity.

Very cold last night the ice on the small reservoir nearby being strong enough to sustain my weight and I thought the Ford could never be started had to fill the radiator full of boiling water, pour boiling water on the manifold and jack up the rear wheels. The I cranked it several times until I was exhausted.

Made a 9:30 start for the next collecting station - Freeman Canyon - Walker Pass - Kern County. The destination was reached about 2:30 p.m. and I began a systematic search for pocket mice sign as soon as the Joshua association was reached. This I accomplished by stopping at half mile intervals and searching for indications of activity a goodly distance out on either side of the road.

About two hours were thus spent and finally, as the shadow of the western hills began to creep across the valley, camp for the night was established at about 4600 ft altitude and amid the thickest part of the Tree Yuccas.

~~XXXX - I had found no sign of Perognathus xanthonotus and~~

I had found no sign of Perognathus xanthonotus and expect they are all now dormant for the winter but I strung out all my traps nevertheless.

I had noted considerable Onychomys sign at the lower part of the canyon and some was seen when setting my traps so hope to catch a specimen or so in the morning.

Nov 20th 1921

The night was considerably warmer than I had expected and no ice was formed on the water bucket.

My traps held a fine catch but no Perognathus, as was to be expected! The catch included 3 Onychomys, one Peromyscus m. sonoriensis, ten Dipodomys (probably mohavensis) and two Dipodomys m. merriami.

After breakfast a bunch of Pinyon Jays numbering many hundreds were seen feeding north of camp and Aunt May went after them killing one. The waz-a-waz-a-waz-a of a Cactus Wren, as it sat singing merrily in the warm sunshine, from its perch on the top of a nearby Yucca, reminded me of spring time.

The day was ideal and I got up my skins in rapid order. After a late lunch I made a reconnaissance about the valley searching for the best locality thru which to set my traps this evening.

I walked down to where an old prospector had a homestead, chatting with him a short time. He informed me that he had had a fine garden until four nights previous when every green thing in the yard was frozen to the ground, even burst his water pipe. Nearby I saw the largest flock of quail I have seen in many years and would surely make a fine shoot.

Traps were set down the wash tho I saw absolutely no *Perognathus* sign.

About 9:30 this evening Aunt May & I went over the trap line with the lantern and such a catch! One *Onychomys*, one *Peromyscus m. sonoriensis* and twenty eight *Dipodomys*!

After getting to the end of the line we followed it back and as I rounded a bush I saw a *Dipo.* hop up to a trap and "whack" he got it over the neck.

Besides the very large catch three live ones were captured, they being blinded by the lantern and were caught with a few quick grabs. These were kept for pets by Aunt May and closed up in the big collecting chest for the night. I put some bait and considerable sand in the chest so they could eat & scratch about.

A Cactus Wren was also found sitting in a dozed condition near a sprung trap. This was given to Aunt May as from appearances I am to have a full day tomorrow.

Nov 21st 1921

My traps held eleven *Dipodomys* and one *Peromyscus m. sonoriensis*. This brought the night's catch up to 45 specimens taken with 69 traps. The *Dipodomys* were surely active but greatest activity was during the early evening when the ground was warm.

They were apparently getting in the last of their harvest as most of the bushes were dropping their leaves and one species of fall blooming brush was dropping its fluffy seeds. The latter seemed to be the largest item in their pockets and several dried grasses & rootlets with which to make cozy nests for themselves against the coming cold.

A few of the specimens were damaged and not saved. The rest were drawn, after which I placed them in a tray out of the heat so they would keep as I intend to move on to the next collecting station before skinning them.

The season is indeed late for *Perognathus*, they having gathered sufficient stores and are now holed up for the winter.

When Aunt May went to get her 3 *Dipodomys* out of the chest shw was astonished to find but one alive. It had probably killed the other two during the night and had now started to eat one of its victims, having devoured the head already.

A nine o'clock start was made and as the Ford pounded its way up I was quite interested in seeing the line of demarcation between the tree Yuccas & the Pinyon Pines. The latter, on the north slopes, came well down on the mountain sides while the yuccas on the south slopes went almost to the summits of the mountains. A very good illustration of what heat and cold can do with two hardy plants, one being more heat tolerant than the other.

A scant growth of sage was growing on the eastern slope near the summit, but it was not until the summit had been crossed that it became common and in some places the only brush growing.

It was with keen interest that I noted the conglomerate zonal conditions prevailing on the western slope as in one place a mile or so west of the summit I noted Juniper, Scrub Oak, Digger Pines, Tree Yucca, Willows and Cottonwoods, all growing in close proximity of each other. This seemed to my mind to prove to me the fertitlity of allocation of faunal life by zones and I shall endeavor at some future date to bring forth a more comprehensive theory with which to work.

irrigation

The ditch which Bear spoke of was dry and it could not therefore depended on as a source of water supply for future trips.

After passing down a very steep short grade I entered a very barren valley and stopped at a water trough to fill the radiator. Ice  $\frac{3}{8}$  of an inch had to be broken on the trough before I could dip out the necessary water.

On reaching Onyx I made inquiry in regard to a vacant house thereabout but was unsuccessful. However, the country did not very promising so drove on towards Weldon. Numerous irrigation ditches were seen frozen over and the light breeze was frosty, making extra wraps desirable.

At Weldon I met the same fate as at Onyz, tho I located Fay Creek and found that a rather poor road went up about four or five miles.

Several fair localities were noted as I motored down the valley but for one reason or other were turned down tho the rehon would make a fine place to work during the spring or summer when camping out would be endurable.

On reaching Bod fish I was greatly surprised at Howell's statement of it being a good locality and failed to see it as a promising place even under summer conditions, so pressed on for Walker Basin.

Near Havalah several very promising places were seen but all were within the boundaries of the game refuge & would necessitate the possession of special permits to collect there.

On reaching Walker Basin I found the place bare as Howell had described but remembering my Carbondale experience as the zonal conditions seemed identical, I solved the Pocket Rat problem and tho sign was not abundant I hope to catch a representation of *Dipodomys a. perplexus*.

Camp was situated near the road under a couple of Digger Pines. About sundown every available trap was set and after the evening meal and I had written my notes they were looked over by lantern light. Four Pocket Rats were taken from the traps and I was very much pleased at being able to locate them in the first trapping night.

Nov 22nd 1921

My traps held some more *Dipodomys* this morning, really a larger catch than I had expected!

This addition certainly gave promise to a busy day as I already have thirty-two skins to put up from yesterday.

I put up forty skins today which proved to be the largest amount I have ever made before in a single day.

Traps were again set thru the same general locality as trapped last night. Again they were looked over by lantern light. Two *Dipodomys* and 3 *Peromyscus m. sonoriensis* were taken from the traps.

Nov 23rd

My traps held five more *Dipodomys a. perplexus* and 4 *Peromyscus m. sonoriensis*.

The weather took on an ominous aspect this afternoon, promising rain or snow before long.

Aunt May went out in search of chipmunks today and after several hours hunt returned with a Junco and a Nuttall Woodpecker. She reported that the leaves had entirely fallen from the shrubbery and absolutely no chipmunks were to be heard or seen. This news did not surprise me as I have never found chipmunk activity during such cold weather as now prevails thru this region.

The traps were again set in the same general locality and on looking them over about 9 o'clock this evening ten

specimens were taken from the line! How Howell could miss them in the basin is more than I can understand as all the pocket rats collected so far have been taken from the valley floor itself.

While working over the trap line a shout from Aunt May, who brought up the rear, proclaimed the presence of a pocket rat hopping about. I was soon in the chase and a lively one it proved to be before the animal was captured. Surely, the name agilis is well applied!

Nov 24th 1921

The cloud enveloped the landscape and a misty rain was falling so as soon as possible the traps were picked up, the Ford packed and we left for the Bakersfield region.

My traps held seven more *Dipodomys* and the total catch of seventeen specimens were carried along to skin at the next camp.

After leaving Walker Basin the road led over rolling Oak covered hills making one of the most beautiful drives I have ever seen.

The road was perfect being constructed of decomposed granite and an even grade.

When starting down out of the oaks the road became steeper and finally began zig-zagging back and forth with rapid decline into canyons and over the hilltops descending all the time. This grade finally ended in the valley a few miles above Caliente and was one of the longest, steepest grades encountered for some time, tho as before mentioned, the road condition was fine.

The misty rain which had been falling all morning began to have the appearance of a real storm, so plans were made to go on thru to Delano where shelter was to be had with the folks there.

The destination was reached about one-thirty p.m. just in time for Turkey, as today was indeed Thanksgiving Day!

I worked on my skins until dark. About ten-thirty this evening I was aroused from my slumber by Aunt May, who had heard noises under the house and had seen a skunk outside her bedroom window.

I dressed scantily and arming myself with the flashlight and the 410 went out in search of the varmint.



The search was not of long duration as on peering under the house, which was elevated about 18 inches and not boarded up, I saw a most amusing sight. The pet cat trying to play with a *Spilogale*! They looked like two boxers sparring tho each used its own method of defense. The cat would approach within a couple of feet of the skunk making frantic efforts with first one front paw and then the other to get in a vital lick and when the cat would get to where the skunk thought it dangerous he would reverse end with great agility giving the cat a dose of his defense. The cat did not appreciate this method and would stagger back spitting, blinking and sneezing. All during the time I spent watching and laughing at their antics the skunk kept up a constant "pluck-pluck-pluck" vocal articulation.

Nov 25th 1921

Busy most of the day with my skins.

Towards dark Mr. McGuinnes suggested that some traps be set for skunks and so not having bait with which to set steel traps bacon rind was placed on the triggers of 3 Schylers, tho I held little hopes of the method.

Nov 26th

To my surprise this morning Mr. McGuinnes reported a spotted skunk held fast by the neck and extremely active, in one of the traps. The killing of the animal proved a problem and after considerable meditation the animal was gassed with carbon-bisulfide tho not without suffering the consequences, as did the cat with close association!

Packed up and left for Bakersfield where I arrived about 4 p.m. Here I found a message awaiting me and turned wheels towards home - spending the night near Fort Tejon.

Nov 27th 1921

I tried to find out about the winter status of the bat colonies there but excepting the fact that one large bunch of bats had been killed by re-roofing a building no other facts were available.

Left about 10 o'clock for Los Angeles where I arrived in due time.

Huey/Duff Valley 1922

(Notes Lawrence M. Huey)

March 22nd, 1922

I met Aunt May at the Santa Fe Depot this morning and after a very short visit with the Palmers left for Pasadena where the outfit was assembled in Mrs. Dickey's garage.

After the loading was completed we were served a delicious lunch as a parting farwell.

I then drove over to D.R.'s where an hour was spent chatting and made my final departure from the Crown City about 2:30 p.m.

After an uneventful Journey, San Bernardino was reached about 5 P.M. and an order was placed with a local grocer for the supplies.

The effect of last winter's freezing weather was very noticable amongst the orange groves, many of them being leafless.

March 23rd, 1922

After completing the packing and shopping after groceries made a 9:45 start for the desert via Cajon Pass.

March 23rd, 1922

Many of my old trapping localities were seen, as the Ford sped along the paved highway. The alfilaria which covered the sandwashes was bursting in to flower, giving the landscape a cast of pinkish spring glory.

As the narrow part of the pass was reached and where the brush came well down into the washes the early flowering thick-leaved Ceanothus was in full bloom, its white flowers showing plainly in contrast with the green verdure of many shrubs.

After passing the 2nd R.R. crossing the two-speed, which is the latest accession on the Ford, came into use - and a potential use it proved to be - tho little did I realize what it was going to perform in the next two days.

Passing thru Hesperia I noted a Lewis woodpecker clinging to a fence picket near a deserted ranch house.

Near Victorville I had trouble with the speedometer so stopped for repair. While waiting on the mechanic the patter of rain was heard on the metal roof for heavy black clouds now overcast the sky, having blown in from the west during the past hour.

March 23rd, 1922

After leaving Victorville several small showers were encountered and in the late afternoon the sky was cleared by a near gale which sprang up from the west.

Near Oro Grande large patches of wild flowers were seen and the farther down the Mojave river we went, the more beautiful were the flowers.

Arriving in Barstow about 4 p.m. I made inquiry about Death Valley roads and was advised to take the Cave Spring - Saratoga Spring - South Death Valley Route. This was contrary to my plans so I decided to drive on to Daggett where a fellow had been recommended to me by a Traveler in San Bernardino.

Arriving in Daggett about dark we had supper in a Chinese Restaurant and afterwards I looked up the man, a Mr. Britt. He likewise recommended the Cave Spring route so after some deliberation I turned about heading for Barstow.

The night was spent in the shelter of a large pile of ties near the railroad as the wind was still blowing a gale.

Mar 24th 1922

I made an early start but lost all the time I had gained on arriving in Barstow, as I had to wait for a local hardware merchant to open his shop in order to purchase a 5 gallon can.

I finally took on all possible water and gas, making my departure about 8:45 a.m.

Crossing the bridge over the Mojave river which was now flowing in a large stream I found the road forked in three directions and an Auto Club sign labeled "Death Valley" pointed towards the north. So I turned north into a 150 mile stretch of barren waste land, and a road over which few machines travel.

The day was pleasantly cool and as the first low range of hills were topped a glorious view of the snow covered San Gabriels to the south was seen.

Good roads were found until Paradise Spring was reached, where a chunky uphill was followed for several miles and now the two-speed helped. Several times I thought the car to be boiling but upon stopping found that I had been mistaken. The whole route from Barstow seemed to run over cross washes and across ranges of hills with the dividing valleys. The most unique of these valleys was crossed after leaving the summit above Garlic Springs. Here the road led over the middle of a Playa, which is the level floor of a dry lake. This mile was the only boulevard found since leaving Cajon Pass and it was taken with a smack of satisfaction as the speedometer turned up from 10 to 25 miles per hour.

This valley proved to be most gorgeously decked in wild flowers and its crossing was thoroughly enjoyed.

A long gradual uphill grind lay directly ahead and as straight as the highway south from Bakersfield.

When about half way up I stopped expecting to find the Ford boiling. But not so - apparently the intermediate gear is a cool speed.

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March 24, 1922

On the mesas amid the glorious wildflowers many pairs of Horned larks were seen. The males strutting in the sandy wheel tracks, uttering their trilly nuptial notes, with their little feather horns standing erect reminding me what small devils should look like.

After a monotonous 3 hour drive Garlic Spring was reached. This place might make a wonderful collecting locality for birds during migration as a dozen small cotton wood trees are planted about a corral and small cabin. These trees were the only ones seen since Barstow and full of bursting buds, proclaiming the coming of spring. The only inhabitant of the place was a Say's Phoebe who kept right on with his business, while we watched, of catching flies in mid-air, when they ventured too near his perch.

From Garlic Spring for nearly 2 miles after passing the sign post the road kept up a wash of coarse sand. This was made easily on intermediate. Arriving at Cave Springs the next watering place about 1:30, we eat our lunch.

March 24, 1922

There was a grand yellow daisy in full bloom on the rocky wind swept hillridges to the west giving the barren hills a touch of color. It seemed remarkable how such stately flowers could thrive so luxuriantly on barren rocky slopes where not even creosote would grow! Some specimens seen were 16 inches tall bearing 8 or more flowers, each blossom an inch in diameter!

Birds, there were none, nor could you blame them for their absence as rocky creosote plains walled in by barren sun-scorched mountains on either side could offer no hospitality.

After a few miles of fair going where the road crossed from the south to the north side of the valley, the old Confidence Mill was reached and the sun having set the first life in the valley was seen - a small bat flying about the old building.

A few hundred yards past the mill the road turned into a wash and such sand!!! The Ford had that sudden feeling, with ~~xxx~~ a quiver that made your very strength fail and cold perspiration dampen your brow but Perfecto came to the rescue with a steady stream of resolute power, tho not until the mile or more was over did I get a steady breath that was free from fear.

Camp was made for the night in Rhodes Wash about 2 miles west of Bradbury Wells.

March 25th 1922

During the early morning hours Aunt May heard the hoot of a horned owl from the crags to the south. What could interest an owl here was beyond me but he seemed happy with the company of his own voice echoed by the cliffs!

I put in a very un-comfortable night as the road seemed to be going directly away from where I wanted to go, so after daylight we walked up the road a mile or so to a sign post which allayed the fears as the road forked here led back down another wash into Death Valley itself and 50 miles to Furnace Creek Ranch - the destination.

This road proved to be the most obscure one yet traveled and a great deal of caution was necessary to follow the tracks of the last traveler over this route.

After several miles of sandy down wash travel the floor of Death Valley was reached and friendly Auto Club signs were conspicuous at close intervals. Good work - as it would surely cheer the heart of a traveler thru this region in summer!

The road led down a sandy wash which by good fortune was well cobbled with rocks giving traction to the wheels.

After several miles of wash travel the road turned out thru an alcali flat where the only vegetation was a species of Salicornia. This reminded me of traveling over our own salt marshes on the coast.

Soon Bennets Well was reached. This point is --- ft. below sea level. The well contains very poor salty water and is situated near a bunch of scrubby mesquites that were leafless at this date.

The road condition turned steadily worse, being over the aluvial fans and full of rocky cross washes. This made travel extremely slow, with the heavy load bumping the differential in every chuck.

Just after passing Bennetts Well a pair of ravens were seen flying near by. These were the first birds noted in the valley.

A few miles farther along an old red Tailed Hawk was seen perched near the top of a scrubby mesquite. It appeared to be in a gorged condition, as it would not fly even tho the Ford was driven within 50 ft and the horn blowing.

Arriving at the old Eagle Borax Mill which is now marked only by an old iron evaporating tank I found several indian families camped. Inquiring of them regarding Mr. Williams I found he was still ~~xxxxxx~~ waiting for me at Furnace Creek to my delight.

Before starting we eat our lunch. I put a new hose connecting on the radiator as the rough roads had fractured the one now on, causing it to leak.

All went well until the salt deposits called "The Devil's Golf links" was reached and this proved to be the roughest two mile stretch I ever saw. So rough in fact, that it was necessary to run in low-low all the way across and the center of the road so high that the braces under the car were torn off. The climax, however, was reached in crossing a couple of days later.

The Auto Club's white truck being the next machine there - spent 12 hours getting over this place.

Mar 25th 1922

A small creek of salt water where the dirt dyke had been washed away by the winter flood. First one side of the car & then the other sank into salt bottomless pits of pure salt until the connection was torn apart and all the water began to escape. I jumped out and tried to stop the leak with my handkerchief until Aunt May could get an empty water bag under the jet cock. This proved difficult as the water was nearly boiling and resulted in a pair of blistered hands.

A handy roll of tape which Carl had forcibly given me proved of great value in mending the break in what was left of my only extra hose connection.

After the rough salt deposit was crossed a friendly sign indicated but six miles more to reach Furnace Creek Ranch. This was good news and after bumping our way over the detrital wash from the Furnace Creek, the tops of green cottonwoods were seen close by toward the north.

The ranch was reached in a few minutes and indeed was a welcome sight tho the small area of green alfalfa fields seemed lost in the wide expanse of windblown mesquite covered hummocks and the shimmering, white, sunscorched alkali flats to the west and north.

The place consists of a few scattered barns, a corral or so, and a few chicken coops with a space planting of fair sized cottonwoods planted at random along the irrigating ditches.

Near the house are two small groves of palms, of two species Date and desert. The desert palms having grown to a tall height give the effect of a real Sahara Oasis.

The ranch house is located on the eastern side of the cultivated area and sheltered from the torrid sun by a corrugated roof. Surely an unusual roof for a hot climate!! The building is of concrete surrounded by a cement patio. On the north side of the screen porch is a water powered fan for use during the hot weather or about nine months of the year.

Water for irrigation is secured from several large springs situated a few miles up Furnace Creek and conveyed thru an open ditch to the ranch. Domestic water is piped from another spring in the nearby foothills. All of which proved to be of good quality so no hardship will be found in drinking it.

A scattering growth of mesquite was growing along the ditch and it was here that the Mexican ranch foreman Victor -----, a pleasant sort, directed me to find Mr. Williams.

A lusty shout brought him from the seclusion of his tent and we immediately set about getting camp established, as it was nearly 4 p.m. and both Aunt May and I were tired out from the long rough journey.

The camp site chosen was just outside the fence, east of the house and in the shelter of a small cottonwood tree.

Just after sundown hosts of bats were seen flying about so I put my shotgun together and collected 3 specimens, 2 Mexican Freetailed & one myotis. It seemed unusual to see the Free Tailed bats, active at such an early hour! (They only were about 2 or 3 nights so must have been migrating.

March 26th 1922

During the night a terrific gale sprang up from the south and threatened to blow the camp away. By daylight the wind showed no signs of abatement so after a hasty survey it was decided to move camp into the shelter of the mesquites.

I did not like this idea, as several families of indians were camped close by and someone would have to be in our camp all the time to keep thieving dogs and children away. However, moving was necessary and move we did.

I spent the day catching up my notes and getting settled.

While writing I chanced to glance up into the bare limbs of a leafless mesquite nearby and to my astonishment my gaze rested on the dried head and neck of a Sand hill crane. I later asked an indian about the bird & he said "it had been killed last December."

Wondering what else I could find I began to scratch about the camp and found dire remnants of Pintail, green-winged teal and Canada geese.

Williams informed me that several Canada geese were still to be found every morning in the alfalfa patches.

After camp had been established he took what large steel traps I had and borrowed some from an indian, placing them about an old mule carcass nearby. This was the only bait available at present.

English sparrows appeared to be the only birds about the place and they were abundant.

I did not set my traps this evening as I have yet to make the trip to Ryan after the supplies I had sent up by mail.

While eating the evening meal many mice were seen scampering thru the mesquite about camp so I set a dozen traps near the food boxes.

March 27th 1922

My mice traps held a single *Peromyscus* and the steel trap held a *Dipodomys deserti* - the latter was ruined by the trap.

Mr. Williams arose very early this morning in hopes of getting a shot at the geese. He saw 5 but could not get within range.

I started out for Ryan about 11 a.m. The road led east up Furnace Creek and a desolate place it was as the whole hillside area is mineralized by borax and absolutely void of vegetation. The only place that even creosote would grow was along the wash bed where the alkalines had been taken away by the storms.

About 3 miles from the mouth of the canyon I passed the springs at which source the ranch seems to get its irrigating water.

A small grove of scrubby mesquites were growing nearby and an occasional existed along the ditch. Several other shrubs were noticed along the ditch tho only growing in very close proximity - salt cedar - a scrubby arrow weed and Desert Willow. The former were just on the verge of bursting into a glorious display of pink bloom.

About 10 miles up the wash are located two large tanks full of water which is piped down from a spring in the hills not far away. About three willows had been planted and were just bursting into leaf.

Near the head of the canyon and situated on the steep side of a barren mountain was Ryan, a picture of isolation - no green - no nothing except the neatly painted living quarters for the workmen and the mine buildings. The place is owned and controlled by the Pacific Coast Borax Company, an English Corporation & is the chief source of borax in this country.

A pair of ravens and a single Rock Wren were the only birds noted on the journey.

I found the Post office & secured my shipments which had come through in fair shape.

The trip back to camp was uneventful and after getting the goods properly unpacked and stored away I started out with my traps about sunset.

West of the ranch, and below the irrigated fields, I found quite an area of arrow weed, evidently kept alive by the overflow. In this association I found some sign of small mammals and strung out my traps.



The scattered tracks of a very small bunch of quail were seen in the sand;

As Mr. Williams and I were returning to camp the call of a goose was "narc" over head and ducking into the shelter of a nearby mesquite we had the good fortune of having 4 geese pass over within range & a charge of 8.8s brought one down.

After supper Mr. Ferris, a snail collector, dropped in to chat. He seemed very pleasant and could talk on many subjects of Natural History.

While talking to him two woodrats were seen running about camp and two traps were immediately set.

I did not have long to wait for results and soon two topos were cooling in the chest. During the later part of the evening a small bat (myotis) kept flying close to our faces until it was finally slapped down and captured by Mr. Ferris.

March 28th 1922

Getting up at the first peep of dawn Williams and I went down to the alfalfa fields in hopes of getting another goose. He took the rifle and I had my shotgun.

It fell my luck to get the shot this morning & I bagged a fine big "Honker" the first Canada goose I had ever shot.

Several killdeer were noticed in the fields this morning and the clear flutelike song of a migrating robin was heard during breakfast.

My traps held 2 *Dipodomys deserti*, 5 *Dipodomys m. merriam* and a *Peromyscus e. eremicus*. The day certainly held promise of being a busy one for me.

I set six traps near some large used burrows in the mesquite covered hummocks below the ranch this morning.

Mr. Williams looked at these traps about noon and to my amazement brought in two *Dipodomys deserti* (both immature). This is the first occurrence I have ever heard of these animals being active in the daytime and active they certainly were as the came to bait.

About 3 p.m. another *Dipodomys deserti* (immature) was taken from the schylers, unfortunately all 3 specimens were either injured by the traps or spoiled by the hot sun.

I did not set the small traps this morning as so many bats were flying I decided to collect a bunch of them.

March 29th 1922

The schylers held three *Dipodomys deserti* and Mr. Williams' steel traps were empty.

The ranch foreman killed a beef today and we were fortunate to get the lungs of the animal for bait tho the indians seemed to think that a waste of good meat. With this bait

a total 8 steel sets of two traps each are out tho there seems to be very little if any varmint sign about. But what coyote would or could live in such an expanse of desolation !

I changed all the schylers about today setting them together with rat traps at used burrows on the north side of the ranch in hopes of getting the Death Valley ground squirrel.

These traps were looked at by Mr. Williams at noon and held but a single Desert Chipmunk.

A few Gamble Sparrows were seen about camp today and a turkey Buzzard was seen flying about the ranch.

I set my traps near the alfalfa fields in the arrow weed asociation this evening.

The schylers were placed in good woodrat locations through the mesquite covered Hummocks.

March 30th 1921 (sic)

My traps held one *Dipodomys deserti*, 4 *Dipodomys m. merriams* and 5 *Peromiscus e. eremicus* while the schylers held a single *Dipodomys deserti*.

In a brush pile near camp 2 *Neotoma i. desertorum* ~~XXXXXX~~ were seen frolicking about this noon and 3 rat traps were set in the runways.

Mr. Williams not having seen his burros for about a week set out to look them up this morning.

The mesquites seem to be coming speedily into leaf - one succulent shoot in camp has grown from 10 5/8" in lenght to 14 1/4" during 24 hours.

In the middle of the afternoon several Swallows were seen flying over the fields. I saw Tree and Roughwings positively.

Williams arrived in camp about 2:30 after a long ride through the hills. He did not see the burros but circled the country watching tracks & is positive they were still in the washes nearby.

I set my mouse traps out thru the Arrow weed again this evening.

The Rat traps in camp and the Schylers set in the mesquite covered Hummocks were not touched during the day.

March 31st 1922

Just after getting into bed last night three sharp snaps at a rat trap were heard so I slipped on my shoes

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and by the aid of the flashlight found a wood rat had been caught.

Twice I was roused from my "downy" in this way & two wood rats were collected in camp.

A desert hurricane came up during the night and by daylight the air was clogged with alkali dust while things about camp were all upside down.

My traps held 4 *Peromyscus e. eremicus*, 6 *Dipodomys m. merriami*, 2 *Neotoma i. desertorum*.

The gale from the south kept up until nearly noon when it quieted down as suddenly as it has arisen. It was now the sun's turn and the mercury raised to 96 in short order. All during the day old Jupiter Plenorus had been collecting for us in the northern end of the valley and about 3 p.m. advanced towards the south giving everything a good wetting. Such was March 31st in Death Valley!

Williams and Aunt May went out to shoot squirrels this noon and also set all the rat traps. Aunt May heard the high pitched "Cheep" at several times but failed to get a shot.

About sundown when Mr. Williams looked the traps over a young *Dipodomys deserti* was found in one.

I chanced to walk a few rods out of camp after the rain-storm and saw two of the much desired ground squirrels disappear down the holes. Returning to camp I removed two of my rat traps from the rat nest near by, setting them near the entrances of the squirrel's burrows. Looking at the traps about dark I found they were unsprung, apparently the animals did not come out again, or surely one would have been captured.

I set my traps up a rocky desert wash this morning & the place looked most uninteresting as only an occasional shrub of any sort existed there. This could be classed "The Encelia or Desert Holly aristocrations" as that plant was the predominantly vegetation. A very few animals, plants were seen scattered at wide intervals but not yet in bloom.

April 1st 1922

The wind blowing violently from the east this morning.

My traps in the rocky desert wash held 1 *Perognathus formosus*, the tail of another and a ♂ *Neotoma*.

It seems odd that all of the adult woodrats taken in the mesquites, so far, are ♀s, while this one in the wash is a ♂.

After breakfast Mr. Williams went out to look at the string of rat traps which was set yesterday. Upon his return with the catch my woodrat theory was proven to be only a coincidence as his catch contained among other things a fine large ♂ *Neotoma*.

The best thing in the lot, however, was a Citellus T. eremonomys and incidently the first taken so far, other specimens collected were 2 Neotoma t. desertorum, 5 Dipodomys deserti, and 4 Peromyscus e. eremicus. By 10 o'clock the wind had reached the violence of a cyclone and the borax dust was stirred up in the air so thick that the mountains, tho only about 10 miles away, were almost invisible. It is needless to say what camp looked like or how its inhabitants felt.

Work was slow and drudging and the meagre shelter afforded by one small wind break was overcrowded, as about 2 million house flies and three humans sought shelter in the same place. So the miserable day dragged by in Death Valley !

Towards evening the wind subsided & Mr. Williams went out to fix another line of rat traps while I went up in the wash east of camp and set my line of small traps.

During the past several days no mention has been made of the steel traps which Williams had set and a verbal report from him this evening stated that he had been patrolling them daily adding such bait as was available, but so far no signs of varmints had been seen.

On his way back this evening he killed a nice cotton tail which I saved for a specimen.

As I was setting the last of my string of traps and where the small ravine came out on the rocky barren mesa, a poor will was flushed. I had no gun and the expediant of rock throwing proved useless. About 7:30, while we were eating our supper an indian boy, who lives in a small shack a few rods up the ditch, brought me a nice pair of Myotis, which he had captured alive, as they were flying about inside his abode.

April 2nd 1922

My traps in the desert wash held 1 Neotoma i. desertorum and two Peromyscus e. eremicus, a rather discouraging catch, but the work for the day was caught in the rat trap line which Mr. Williams and I looked over after breakfast. Two Onychomys, two Dipodomys m. merriami, two Dipodomys deserti and another fine ♂ wood rat was the catch.

I was surprised at catching Onychomys and incidently they ~~they~~ were a pair and taken in the same bush. Upon dissection the ♂ appeared to be in a state of breeding activity.

The day was a bit windy, but infinitely better than yesterday. Large bunches of fleecy clouds were tossed about high over the mountains, screening out the torrid sun at intervals and modifying the heat to an acceptable temperature.

Mr. Williams looked over the rat trap line at noon and found another immature Dipodomys deserti had been taken during the morning. He also stated that a coyote had circled one of his steel traps.

The migrant birds seem to be drifting in as a small indian boy was seen about noon with a male green winged and a ♀ blue winged teal which he had killed with a small rifle in an irrigation ditch in the fields.

Mr. Williams brought in a Wilson snipe which he shot when making the rounds of his traps and Aunt May killed two immature Nevada Redwings from a small flock that came near camp in the afternoon - a scattering of Gambel Sparrows were also noted near camp during the day.

I did not set my small traps this morning as I wanted to take particular care in setting and baiting the rat traps in hopes that I might be more successful in catching squirrels and going over the traps one had accidentally ? been caught during the afternoon.

Mr. Williams went out to search for his burros after lunch, taking the 410.

Near the spring about 1 mile east of the camp he flushed 5 Teal which on taking flight were swiftly pursued by a hawk (which I took from this distance to be a Prairie Falcon) and as it passed him at about 20 yards, he fired. Some of the shot took effect as the hawk squirmed and gently volplaned, lower and lower, until out of his sight. He did not find a trace of the elusive burros and was somewhat worried in regard to their whereabouts.

April 3rd 1922

The night was uncomfortably warm and when I arose at 5 a.m. the thermometer registered 72°. This looked like a warm day ahead !!

I looked the rat traps over while Mr. Williams went around his steel sets.

The rat traps held a light catch - two *Neotoma i. desertorum*, 2 *Peromyscus e. eremicus*, 1 *Dipodomys deserti* & 1 *Dipodomys m. merriami*.

Mr. Williams reported the return of the coyote & had circled the set at a closer range this time.

After breakfast he borrowed a saddle horn from the ranch and set out to search for the straying burros.

About halfpast eight Aunt May took the gun and set out with a determination at bagging some squirrels. She stayed out until eleven and then only driven in by the torrid sun whose rays were very intense. Plenty of squirrels had been heard and a shot taken at one but unfortunately the crippled animal was successful in escaping.

At noon the thermometer registered 102° & had been in the shadow all the time.

April 3rd 1922

Mr. Williams arrived in camp about 2:30 p.m. driving six of the desert transports ahead of him and I soon was to have my first lesson in handling Burros. In the bunch was one black Jinny, celebrated from Mojave to Goldfield for her kicking ability. She was given to Mr. Williams by a man in Lone Pine, who's patience and forgiveness had been suddenly reversed by a sharp kick in his middle. Mr. Williams informed me that great caution was necessary, when going around this beast as she made no preliminaries in her attacks, just up with a hind foot, and let fly. Evidently, this black burro was to be the "goat" of this trip and no doubt much excitement will be forthcoming. I took special care in resetting and baiting the rat traps this evening.

Williams took a bag of bait which he scattered about his steel sets and when returning to camp saw a band of about 40 Robins in the lower alfalfa field.

April 4th 1922

During the early morning, before sunrise, the wind commenced to blow from the south, and, by daylight was speedily approaching a gale.

While breakfast was in preparation I went over the rat trap line and found a fair catch, despite the wind. Probably the animals had been caught during the fore part of the night, as in that period only gently zephirs blew.

Specimens collected were one onychomys, four Neotoma i. desertorum, three Dipodomys deserti, one Dipodomys m. merriami and 2 Perognathus formons.

I was quite excited over the capture of the 2 latter animals as at first I thought them to be P.p. stephensi but after some cogitation, changed my mind, as in the field of memories I remembered some of the appearances of the two species. \*\*\*

The wind seemed to be gaining velocity so a small canvass was rigged up for a wind breaker and behind this we all took shelter in company with 2½ million house flies which our combined efforts failed to expell.

The skinning for the day was accomplished with considerable difficulty and the ten skins were not completed until after lunch and at this time the wind was ripping up the dust.

\*\*\* Only one of these specimens was saved as the other was destroyed beyond repair by what appeared to be Pocket Rats tho positive identity of the vandal was impossible but many tracks about indicated their presence.

Not having found all of the burros yesterday Mr. Williams set out after lunch to look them up. They were found about 7 miles up the canyon and it was with considerable difficulty that he drove them into the wind storm and back to camp, which was reached about dusk.

During the afternoon the wind increased until I thought that even the mesquites would surely be blown away. Salt and Borax dust was blown up from the marshes, the mountains on either side of the valley were but dim outlines and the sun obscured from view.

Camp life was miserable! Dust pelted on things, even penetrating the sleeping bags, until it could be scraped up. No traps were set this evening.

During the night the wind reversed, blowing back from the north and all the accumulated clouds were driven over, precipitating spurts of rain thru the valley and to our astonishment snow! on all the peaks of all the surrounding hills!! My thermometer registered 48° at 5:30 a.m and the sky was overcast promising to be cool and windless day.

Apr 5th 1922

The rat traps, which had not been rebaited since yesterday morning, held 4 *Dipodomys deserti*, which I gave to Williams for his steel traps.

I made the "rounds" with him this morning and was well pleased with his trap setting. Surely there must be a dearth of Varmint life here as some of the sets were in excellent locations.

A lone coyote circled one set, stepping within 6 inches of an outlying trap. Hard luck!

After looking the traps over I built a box for the Geese and later drove up to Ryan to ship it and purchase a few supplies. Near Ryan I saw 2 Western Red Tailed Hawks circling about - surely a poor place to find a living - not speaking of the worry of raising a brood, which they must have safely tucked in a nest in a niche of some lonely crag.

The wild flowers up Furnace Creek were at their zenith and while there were no masses to deck the wash, close scrutiny of each variety revealed unexpected beauties never before seen by me in wild flowers. I picked a good bunch for Aunt May in camp.

While I was gone to Ryan, Williams looked over and rebaited the rat traps in hopes of trapping more *Citellus*. All my small traps were strung out this evening thru the mesquite covered Hummocks.

About 9:30 we took the lantern and inspected the line, taking good bunch of animals from the traps, five *Peromyscus e. eremicus*, 1 *Neotoma i. desertorum*, 1 *Dipodomys deserti*,

While I was gone to Ryan, Williams looked over and rebaited the rat traps in hopes of trapping more *Citellus*. These animals are extremely wary and we may have to resort to shooting them altogether.

Part of the reason for this shyness, I believe, is the fact that the indians about constantly pursue them for food, as almost every inhabited mesquite hummock has either a small, cleverly rigged dead fall in working order or the old remains of one.

I was quite interested in the construction of these traps and offer a poor description herewith. A flat rock for a fall propped up in an oblique position over a runway in the mesquites. The stone is left this way several days and gradually a small fence of sticks is constructed to guide the victim under the rock. After the animals become accustomed to the ~~presence~~ presence of the traps and begin to use the trail regularly, as is indicated by their tracks. A very clever trigger is substituted for the stick, which propped up the flat rock.

The regular "figure 4" prop and top stick are used but instead of the long treadle which usually comes out to the point of the "4", a short string is tied to the end of the stick, and on the other end of this string is tied a very short round stick about an inch long. This is brought back of the prop and held by two treadle sticks which are lightly braced against the rock to the back and which act as traps, for as soon as the animal touches them down comes the Rock.



About 9:30 we took the lantern and inspected the line, taking good bunch of animals from the traps, five *Peromyscus e. eremicus*, 1 *Neotoma i. desertorum*, 1 *Dipodomys deserti*, 4 *Dipodomys m. merriami* and 4 *Perognathus formosus*.

April 6th 1922

The dawn broke with the promise of a beautiful day and a temperature of 68°.

My mouse traps held one *Neotoma i. desertorum*, one *Perognathus formosus*, 4 *Dipodomys m. merriami* and 3 immature *Dipodomys deserti* and the Rat traps contained 1 *Peromyscus e. eremicus*, six *Dipodomys deserti*, one *Dipodomys m. merriami* and one *Onychomys*. Combined with the last night's catch I certainly had the prospects of a long day!



Fortunately, the day proved to be one of those ~~and and~~ of which only the desert can boast, pleasantly cool in the shade and comfortably warm in the sunshine with the perfume in the balmy air of distant flowers and bursting mesquite buds - a day which even I, a pessimist now, could not overlook.

Traps were again set this morning tho part of the line was strung thru the rocky wash where only creosote brush was growing.

On looking over the traps at night by lantern light a light catch was picked up - 3 *Perognathus formosus*, 4 *Dipodomys m. merriami* and 3 *Dipodomys deserti*.

The only species taken in the creosote was *Dipodomys m. merriami*.

Apr 7th 1922

High clouds obscured the sun this morning and the temperature read 70° at 5:15.

My traps held 3 *Perognathus formosus*, 6 *Dipodomys m. merriami*, 2 *Dipodomys deserti* and one *Peromyscus e. eremicus*, while the rat traps held 3 *Dipodomys deserti* and 3 *Neotoma i. desertorum*. Another good catch and another wonderful balmy day!

Mr. Williams tried to shoot some *Citellus* but tho he knocked 3 down with heavy 12 gauge shells they fell in the holes and were lost.

At noon the thermometer registered 86°.

I changed trapping localities this morning, setting about 3 miles south of camp in the salt bush associations near the furnace creek wash. The place did not look promising but I tried it anyway as I am most anxious to secure specimens of *Perognathus stephensi* here before going to the type locality, so I can determine in which type of ground I can find them.

April 8th 1922

My traps were very disappointing this morning as only 4 *Dipodomys m. merriami* were captured and two of them had fractured skulls.

The rat traps near camp held 1 *Neotoma i. desertorum* and tho two *Dipodomys* had been caught, something had devoured them leaving but a whisp of hair and a dislodged trap to tell the tale.

Three consecutive balmy days are absolutely impossible in this region and about 8:30 a dense haze was noticed over

the borax flats, soon the game was on. The trees rocked to and fro at the winds pleasure and I used as much of the ozone as I could, on profanity, to no avail!

Mr. Williams went out to look at the burros, returning with them about 1 p.m.

A very small Indian lad from the camp above had become quite friendly and as he came by camp this morning I questioned him regarding ground squirrels. He would not talk much but I finally offered him the use of the 410 and a reward of 5¢ per squirrel, if he would hunt them for me. He seemed satisfied and accepted the offer, took the gun and went hunting. I did not expect him to be successful as the wind was blowing a gale but he returned in a couple of hours with 3 squirrels, 1 small rabbit and a wood rat. Having fired but 4 shots.

The intellect of the indians would certainly be a puzzle to a phsycologist as when the boy hauled the kill out of his pockets only the squirrels for which I had bargained were offered me, the other 2 animals being thrust back as soon as they were represented - not a word was spoken. He received his 3 nickles, a piece of candy and an apple, set down the gun and left.

I was well pleased with the bargain as during the past two weeks all three of us had taken a trial at hunting squirrels and 22 were constantly watched and kept baited, with the grand total of but three specimens.

Aunt May & I had just finished our lunch when Williams came in and the wind was blowing strong from the south. Williams sat down to eat his lunch and I sat down to my skinning. Suddenly dead calm as the south wind stopped and we all looked about sort of bewildered and as suddenly the north wind struck back - with tremendous volume - and dust, sand and borax so thick that I could not see the tents which were less than 30 ft. from me.

Such a clatter and ripping as the camp was turned upside down, the canvas awnings were slashed into bits and the tents, kettles, pack outfits etc. were all blown into the mesquites.

A large bunch of cut mesquite limbs, which had been piled around the camping space to keep out the wandering burros, had been blown into the camp, adding confusion. Life was miserable and it took over two hours to pick up the scattered articles. Fortunately, no specimens were uncovered and so no losses to their numbers resulted.

The damnable wind kept going all the rest of the day and well into the night, making trap setting impossible.

April 9th 1922

The wind blew in blusters all day long keeping every one alert and everything either weighed down or safely packed up.

About sundown Williams and I took the Ford driving out north of camp towards the old Borax mills in search of good trapping ground where *Perognathus p. stephensi* might be found.

I was sorely disappointed for as soon as the influence of the springs and irrigation were passed only alkalic flats and bleak rocky desert were to be found.

The old Borax works, now deserted and gone to ruin, was situated on the mouth of a wash and here the white alkali marshes of the valley floor were connected with the rocky wash and mesa association having but a narrow strip of Bermuda grass to blend.

No sign of mammal life or any life there was to be found here, nothing but a couple of adobe walls, an old steam boiler and a pile of discarded wagon parts were to be seen on the bare baked dazzling landscape. Finding no suitable situation in which to trap I turned back and finally after much deliberation chose a situation where the mesquite - arrow weed association commenced to blend with the bare alkali flats.

Much of this ground was barren and was of the "Self-raising" type that is a very silty soil, which upon receiving moisture such as a slight rain or dew, raises a hard crust sometimes many inches above the packed soil underneath. In places, when walking thru this type of soil I would sink in almost to the shoe tops.

The most prominent growth about was stunted arrow weed which grew in small patches whenever soil conditions permitted and near these lumps much animal activity was seen in the shape of burrows, wallows and feeding ground.

On the eastern extremities of this place a small stream of water formed its sinking ground and the direct influence of this moisture was apparent by the more luxuriant Arrow weed the specimens of this plant in no instance reached over 5 ft. in height.

Two lines of traps were strung out, one over the dry area thru both arrow weed and mesquite and the other ~~xxxxxx~~ followed up the stream over thru the arrow weed.

April 10th 1922

The traps held a great catch tho none of the much desired *Perognathus p. stephensi*. A series of 18 *Dipodomys m. merriami* showed the bleaching effect of the alkalis as some

of the specimens were a bright buff in color. I was sorry not to being able to save more than 12 of them during the day.

Other things taken were 4 *Peromyscus* e. eremicus and 4 *Dipodomys deserti*. I could see no preference with the animals between the traps set in the close proximity of the creek and those set in the dry area.

The rat traps held 2 *Dipodomys deserti* and later captured a *Citellus*.

Mr. Williams coyote set held another ♂ coyote this morning. Quite a surprise as this same set, tho different traps, held the one caught yesterday and the day looked like a busy one for me!!

Getting a late start this evening Williams & I drove up Furnace Creek about 3 miles setting the traps out in the wash from Echo Canyon.

No sign of life was noted tho a sprinkling of annual plants indicated the place could be inhabitable.

This wash was of the rocky sandless type with an occasional bush growing in suitable localities, very scattered at the best.

Several kinds of brush were seen - Holly and Creosote apparently in equal numbers, while brush and *Pyracanthas* grew in the gravelly washes. Echo wash, as it is called, rose on a sharp incline from the begin of Furnace Creek, which contains a great expanse of surrounding country, thru the hills which bordered Furnace Creek, to a vast black stony mesa which bordered the Funnal Mountains. About 1200 ft. altitude is gained in this 3 miles of wash.

The predominating vegetation of this mesa is a very scating growth of creosote, now a burst of yellow bloom. This scrub itself never nurtures any animal life as the seeds are too small to be either harvested or stored and their seeding too irregular.

Almost a full moon arose from the east, as the sun set in the west and while the last of the traps were being set, the moon and stars took watch over the landscape. From the vantage point we had reached in trap setting a grand view of Death Valley lay below. The twinkling lights from the ranch house & the flickering indian campfires all snugly burning along the water ditch seemed but a speck in the broad expanse and seemed dancing in the heatwaves.

The large area of white salt marsh which stretched the valley's length looked ghost-like in the soft moonlight and by the time the Ford was reached, the cool mountain air had already began its nightly ascend to the sun scorched valley and the need of wraps was sorely felt.

As we passed where the springs were diverted to the irrigation ditch a lone chuck was seen, sailing in on set wing seeking an evening meal and a cool place to wet its beak.

April 11th 1922

My traps were rather disappointing but all that could be expected from such a barren place! Two *Peromyscus i. stephensi* and 3 *Perognathus formosus* were the total catch.

The rat traps held a single *Dipodomys deserti* and about noon two *Citellus* were taken from them. Another of the latter species was shot by Mr. Williams during the afternoon. About 10 a.m. I happened to be out of camp and away from the noisy babble of water in the irrigating ditch when a startling s-s-sisbush was heard nearby. Quietly looking in the direction from where I had heard the noise caught a fleeting glance of a Peregrine Falcon as it sped away with its victim, probably an English Sparrow.

This evening I set my traps far up on the rocky mesa and almost against the base of the Funnal Mountains.

This locality looked very promising as brush was thicker and a splendid crop of annual vegetation was growing.

Trap setting proved rather difficult as there was no soil or sand with which to bed the traps, nothing but small water worn rocks.

April 12th 1922

My small traps held but 2 *Perognathus formosus* this morning and only one other trap was sprung. This was a disappointment but showed very plainly that many other conditions must be considered when choosing a trapping locality expecting to find it inhabited.

The rat traps held a *Dipodomys deserti* and a large *Neotoma i. desertorum*. Near the wood rat lay two very small young - dead. They had probably followed their mother out of the nest and chilled during the cool night.

After getting up my skins I drove up to Ryan after supplies. I had planned to set traps near the water tanks which are situated about 8 miles up Furnace Creek but a very strong wind came up from the south while I was at Ryan, making trap setting that far from camp unwise, when conditions were not right.

April 13th 1922

We proof read all specimens this morning and while so engaged the indian boy brought me a very small cottontail which he had killed with a sling shot.

About noon I commenced to assemble a small outfit with which to make a four day trip into the Mesquite Valley.

I made my departure about 4 p.m. and after passing the old borax mill encountered 15 of the roughest miles yet traveled. The road paralleled the salt marsh and ran across the rocky washes which extended from the canyons to the east to the valley floor, I was almost 2 hours making that short distance.

On reaching the northern end of the salt flats the roads became much better, but not for long, as a low range of hills which divided Death Valley proper from the north west arm, proved to be nothing but sand dunes with a light coating of small stones over them. The Perfecto 2 speed came in for its real test and nearly 3 miles were run in low-low gear with the wheels into sand over the fellows.

The place was the most barren desolate area I had yet seen and over these sand dunes the only vegetation was a dozen or so beautiful desert daisies nodding their golden heads to the light evening breeze.

I arrived at Salt Creek about 6:30 and after a survey of the surrounding country set my traps about  $\frac{1}{2}$  mile north of the well.

The place did not appear to have much mammalian life, tho a few *Dipodomys deserti* holes were noticed.

The vegetation consisted of a growth stunted arrow weed, some *Salicornia* and a few rather unidentified shrubs all growing along a narrow strip of silty water bearing ground about 100 yards wide and  $\frac{1}{2}$  mile long.

In fact this was the only locality hereabouts that could possibly shelter mammal life.

I looked over the traps by flash light about 11 p.m. finding but two *Dipodomys deserti* and one of these had a smashed skull!

April 14th 1922

My traps empty, just as I had left them at midnight, so after a self cooked breakfast I pulled out for Stove Pipe 5 miles farther up the valley.

The whole six miles was a grind in low and lower low as the road paralleled the sand dunes as ~~as~~ there had been no one over them since the last wind storm the ruts were level full of soft sand. So soft was this sand that the movement of the front wheels, as they were forced thru, could be seen in sand 18 inches all around each wheel.

I certainly was thankful for the light load and the "two speed" as no regular Ford could have made it without some one to "lend a shoulder to the rear".

I arrived at Stovepipe Wells about 9:30 and such a place! Desolation. Dreary, lonely and every other delectable descriptive adjective which our language possesses.

Several holes about 6 ft deep half full of green salty water constituted the wells, a Geological Survey bench mark, a Geological Guide Post and an old dugout, with a sod roof were the only marks of the human hand. This dugout must have been before the "Big Drought" as dozens of empty beer bottles were built into the 3 walls and outside was a very large pile all broken up.

A telephone line to Rhyolite formally ran past this place but has long since been abandoned and this shack was probably built while the line was being erected.

The only source of fuel for the traveler in this place is telephone poles and they have been chopped down for a half mile each way.

After putting up my one skin I scouted about for a trapping ground and all I could find was a larger area of the same stuff thru which I had trapped last night. A discouraging chance but I resolved to try it, at least one night.

A lonely grave nearby of some old prospector was marked with 2 pieces of board. Such is the end of the prospector in Death Valley and lucky at that, to have some one pass by in time to cover his bones with alkali dust!

I worried away the day and a tiresome day it proved to be - nothing to do but keep out of the glaring sun in the dirty dugout.

The hoarse croak of a Raven as he flew past was heard during the afternoon and ~~xxxxxx~~ turned out to be the only living thing in bird life about the place.

I set out all my traps carefully this evening and on going over the ground grew more despairing with the prospects of catching *Perognathus*.

April 15th 1922

With the morning came the wind!! and wind it really was. I got out after my traps as early as I possibly see to find them and by that time a great portion of the markers had been blown away.

Fortunately my heavy tracks were still visible but had I waited much longer they too would have been obliterated.

I found all the traps and had to dig to find a few of them but the catch was nil - 2 *Dipodomys deserti* and that was all! However I do not wonder as it certainly would take a big husky rat to live in such a desolate, windy hole!

As yesterday I spent the day in the Dirty Dugout but hiding from the wind instead of the sun - and how the dreary lonely hours dragged by - nothing to do but watch the swirls of sandy wind go rushing by - and I thought about Pasadena and how I would like an Eskimo Pie!!

Late in the afternoon the gale stacked up, so I loaded up the Ford, turning back towards Salt Creek.

About halfway back and near the southern extreme of the sand dunes I saw what I thought might be good trapping grounds about 3 miles to the west of the road, so shouldering the trap sack I set out to investigate.

The route to the locality I had in mind, was none too easy walking as about 2 miles of it was barren crusted alkali soil in which I sank to my shoe tops every step, breaking the crust only when about half my weight was applied to the extended foot.

On reaching the selected ground I found it to be covered with stunted arrow-weed bushes all growing on top of Hummocks from 2 to 15 ft high - a queer looking sight as the bushes stubbornly resisted the winds holding onto all possible soil with the roots, while, as the years of the shrub's life lasted, the soil was blown away all around them leaving them perched on a mound to die of drought, when the mound became too high.

Some *Salicornia* was noted and would probably give subsistence to a few small animals tho owing to the wind accurate judgment was impossible. I strung out the traps in a straight line covering as much of the place as possible.

While setting the traps I saw a pale colored Marsh Hawk flying about, what it was doing here was unexplainable to my mind, and several problems arose therein, at the bird's presence.

After the traps were set and I was about halfway back to the Ford a lone Jackrabbit was seen scurrying over the alkali ground out of my way.

Varmint tracks were numerous tho their tracks would last here perhaps years when pressed into the crust during the damp season.



April 16th 1922

The wind blew terrificly during the night making sleep impossible owing to the drifting sand which poured into my bed thru every possible place.

The trapping last night was an utter failure, only one trap sprung & that by a twig which had been blown from the bush above.

I searched about this morning for small mammal signs thru these Hummocks & found the tracks of a single *Dipodomys deserti*.

The morning proved to be another of those glorious balmy days. How the reaction can come about is beyond me. Recompense I would call it for the dubbing it gave the country yesterday!

My pligh, as far as occupation, was even worse today, as I did not have disagreeable weather to contend with, so after whistling all the songs I knew I stirred my energies up and went over the Ford, tightening and greasing it, doing it as thoroughly as a creeper looks over an old pine stub. This work lasted into the early afternoon and then loading up I headed back to Salt Creek.

Arriving there about 2:30 I went on a general survey of the surrounding country.

I first inspected all the washes for a distance of about 1 mile and a half along the southwest side of the place, hoping to find some sandy places where I might catch the desired perognathus.

The search proved futile as far as promising trapping localities were concerned so I went back to the Ford, getting my trap sack and commenced setting the traps thro a continuation of the silty ground south of where I had trapped 3 nights before.

Just as I was finishing up the trap setting, the wind began blowing from the east in violent gusts and kept it up until dark. This had a disastrous affect on the traps tho I hoped some of them might be situated so they would be sheltered from the tempest.

April 17th 1922

The wind blew in squalls all night long, kicking up lots of sand & I had a miserable night's rest.

My trap line was completely routed and but a single *Peromyscus e. eremicus* was taken.

Having no better place to trap, I determined to try this place one more time so prepared again for another idle day.

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However, a good hike and a few hills to climb, where I could get a general view of the surrounding country, whiled away the morning in short order.

Salt creek was interesting and would make a good collecting station during the water bird migration. The place gets its name from a very briny stream which finds its source near the southern base of the sand dunes & flowing south into Death Valley.

The first birds seen since leaving Furnace Creek were about a half dozen Gambel Sparrows near Tule Springs and just before getting to Eagle Borax, about 15 Anderson Warblers were seen flying about a bunch of Mesquites.

The Flora varied according to the saline qualities of the water and oddly enough ! it was the salicornia aera that existed to the north nearest the stream's source. As the stream flowed its course down towards the pass between the hills before getting down into Death Valley, large patches of Carriero canes were growing and on looking along this stream I saw lots of varmint tracks both cats and coyote where they padded along the soft mud in search of food. I could readily see why Bobcats would be here as the salty stream was teeming with small fish some of them about 3 inches long.

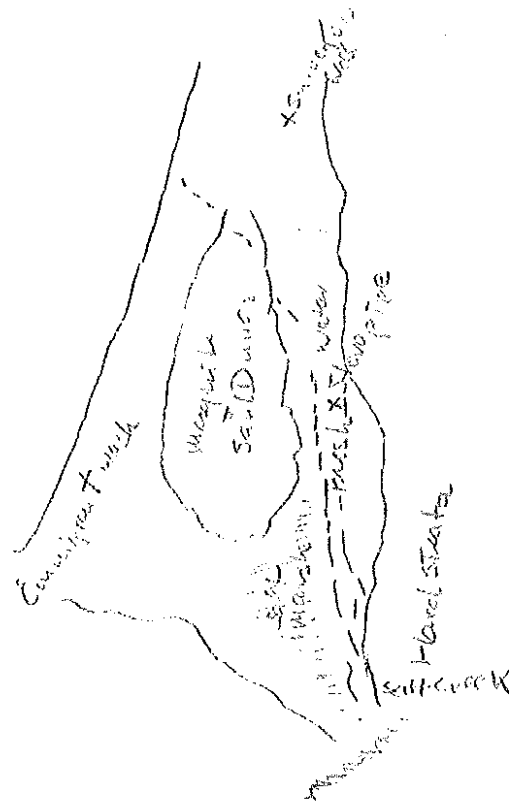
When getting to a position opposite camp I found the road where it crossed Salt Creek. Sand has its terrors for the motorist but as soon as his troubles are over the wind covers up the tracks and the next traveler starts with a fearless mind. But mud and marshes show the scars for many years and this crossing had scars plentiful - and I raised my hat reverently and hoped that it would never be my task to cross that 50 yards.

Along the stream at this point, several kinds of rushes were found. These semi-salt tolerant grasses were undoubtedly influenced in their abundance by a much fresher subterranean flow of water, than that running in the stream.

Upon examination of the geological formation of the range of hills, which divided the Northwest arm and Death Valley proper, I found it to be a sedimentary strata and very hard, ~~impenetrable~~ impermeable by water. This acted as a barrier to the subterranean drainage from the mountains surrounding the northwest arm of the valley raising the water to the surface at this point, and was also responsible for the ease with which water was obtained at the several watering spots up the valley such as Stovepipe and Surveyors Wells. Thus the entire flora of the North West arm of the Valley was directly responsible for its existence by the presence of this

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strata. That this part of Death Valley is much older geological than the rest of it, I am quite certain, as the salt springs would indicate that the subterranean channel carries the water thru a saline deposit, which must have been deposited when the place was at a lower level than Death Valley is now.



Map of Mesquite Valley  
North-West arm of  
Death Valley  
showing  
Fresh & Salt water  
areas

This saline deposit then has great bearing on the mammalian life of the valley, causing vast areas to be void of life, notwithstanding the fact that much vegetation of certain species exists, such as salicornia & arrow weed. I have found, that when other conditions enter in, both of these plants are used as forage by several species of mammals

The geographical location of the two mentioned wells and that of Salt Creek, from which well water was drinkable, indicated a strata of fairly good water along the eastern side of the valley. This also was decidedly proven by the existence of several kinds of brush which would only grow where the water was free from salt.

This area of silty water bearing ground found its most productive area near the confluence of the salty stream close to the sedimentary hills and here many different flowering annual plants were growing luxurantly amid the

brush. In this association I found considerable mammal sign despite the limited bounds.

A single vesper sparrow was flushed nearby and a marsh hawk was seen beating to and fro over the carico patches. This was probably the same one observed yesterday farther up the valley.

A pair of ravens had a nest on a cliff nearby and I figured and schemed how I could possibly get the set but without a rope & someone to help I was helpless so gave it up.

While at the cliff a Prairie Falcon flew past - probably searching this salt creek for a stray migrant to catch.

In the middle of the afternoon a flock of white-throated swifts were seen darting about and a barn swallow passed close overhead.

Traps were set thru the sandy strip this evening and as the last of them were being placed a poor will was seen flying past.

I looked at the traps about 9:30 with the flashlight, taking 2 *Dipodomys deserti* and an unidentified pocket rat (*perodmys*). Another *D. deserti* was caught alive by blinking it with the flash.

April 18th 1922

I was up very early this morning getting in my traps which held 1 more *Dipodomys deserti*, and four *Ruthiodentomys*.

I then struck out for camp at Furnace Creek where I arrived about 8 a.m. after a rough journey.

Just as I drove in Mr. Williams was returning with another coyote which he had taken from the set by the dried mule carcass. The beast was a female and in a lactating condition.

Williams helped Aunt May start assembling the outfit, preparing for a start Thursday morning on the Panamint trip.

Numerous migrants were seen about camp - a Lincoln Sparrow had come into camp becoming very friendly and the Gambel Sparrows had doubled in numbers during my absence.

Several white throated swifts were seen darting about in company with a bunch of Roughwinged Swallows.

Many straggling sharp-skinned hawks were seen during the day and having no better prey made life miserable for the English Sparrows keeping them in hiding amid the thorny mesquites.

In the evening several night hawks were seen flying about and were probably the Pacific and again the free-tailed bats were seen. They too were probably migrating.

Aunt May told me that in the early evening of April 16th she saw a sharp skinned hawk catch a Freetailed bat in the air ! The hawk must have been hard pressed for food, tho I would not envy him of such fare!

April 19th 1922

This was my busy Day! Packing and shifting a collector's outfit from a compact automobile load to equally balanced well proportioned pack animal loads and in such shape that every thing is accessable and convenient is no small undertaking.

About noon I took the Ford up to Ryan where I had arranged for its storage and Williams went out to round up the Burros.

Everything went fine - no hitches - no unpleasantness - just as I had planned it - every fellow knew exactly what he had to do and did it with accuracy and dispatch.

I sat up until 11:30 getting some final notes and correspondence caught up.

April 20th 1922

Reveille at 4 o'clock this morning and after a good breakfast the 10 burros were brought in for loading.

Many adjustments were necessary to fit the saddles & cinches and get the loads properly placed so not until 10 o'clock did we make our departure from Furnace Creek.

Just as I drove my mount over the small bridge which crosses the irrigating ditch I heard the rattling trill of a Belted Kingfisher and saw him pass by overhead. Surely he must have been lost and was voicing his opinion about such a fishless stream !

Everything went fine until the middle of the Devils Golf Course was reached and then a bad boggy salt sink about 10 ft wide blocked the way. Here, one burro balked and the rest balked with him and I struggled with the leaders to no avail. Not until Mr. Williams, who brought up the rear, came up, did we get any action.

Meanwhile the whole bunch of them (I had my saddle burro over) began milling about on a very small space - bumping each other near the boggy edge of the road and jamming the packs. One innocent little burro got to nosing about the ground near the old black jinny's heels and received a severe kick between the eyes (it sounded to me like the sharp rap of an ax on a solid oak log!) This offence dazed the grey burro and he braced himself as

steadily as he could, shaking his woolly head and batting his eyes for several minutes. The rest of the bunch became alarmed and some of them even tried to turn back.

Aunt May dismounted and blocked the back road while Williams and I chugged the stubborn bunch over the bogs.

This took us only a short time as Williams is a very stern man in "Handling" (as he calls it) them.

I grabbed a good hold on the halter rope while he swung a handy 2x4 about 5ft long on the rear of the balky burro with a very hoarse yell and a menacing swing of the timber, the burro would lunge and was over, not having had to receive a blow from the club, but by having fear of the bog - and all went well.

A few miles past the salt marsh crossing one small black burro wanted to quit and lay down so his pack was shifted to a riding burro and he was ridden.

So well did Williams understand the packing that not a pack slipped in the 19 mile journey.

Arriving at Eagle Borax at 5:30 p.m. we pitched camp under some large Mesquites a few rods from the old well. The Mesquites were much farther advanced here than they were at Furnace Creek and had a beautiful covering of new green foliage.

I strung out my traps along the Mesquites and up a desert wash. This was the first time I had set my traps on the Panamint side of the Valley.

All of us were very tired, so no time was lost in retiring.

April 21st 1922

My traps held a very poor catch, 1 immature *Neotoma i. desertorum* & 1 immature *Peromyscus e. eremicus*. A band of cattle had followed up the line, springing the traps and chewing the markers.

While we were eating breakfast my attention was called to a number of large hawks circling about nearby. I watched them several minutes, counting 9 birds, when one of their number sailed once close enough for me to have a good look at it, but out of gun range. It proved to be a Ferruginous Rough-leg and the whole 9 were on their northern journey.

A few birds were seen about, several Mourning Doves - a pair of Western Kingbirds and an abundance of Western Chipping Sparrows were in the Mesquites near camp.

After getting up my notes and few skins Aunt May and I went hunting around the slough nearby. Not many birds were seen and but a few collected.

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A small mixed bunch of Blackbirds were feeding about, thru a band of cattle and closer scrutiny revealed 2 male Yellow heads, several Nevada Red-wings and a scattering of each Western Brewer blackbirds and Dwarf Cowbirds. As they arose I got a single Brewer Blackbird on the wing.

Circling about the slough I flushed a Yellow Rail and a defective prisma in the aux. prevented his capture. His flight was so short that to use the big shell was impossible.

Several Nevada Savannah Sparrows were seen about the marsh, but all were flushed from places where, if I had shot them, they would have been irretrievably lost in the tules.

Aunt May shot a Rough winged Swallow from a perch in a dried Mesquite tree. Many of the swallows were flying about during the day.

April 21st 1922

Several sharpshinned hawks darted past during the day, and the lone light colored marsh hawk which I think was the same one seen at Salt Creek flew past in the late afternoon.

I set my traps up a wash directly west of the old Borax Works and Williams set out a line of Schylers near rat nests thru the Mesquites.

During the evening as we all sat about chatting after dinner, a burrowing owl was heard in the Mesquites near by.

April 22nd 1922

My small traps were absolutely empty tho several were sprung, most probably by nocturnal buzzards as many queer shaped tracks about indicated their presence.

Williams caught 4 *Neotoma i. desertorum* in the Schylers. These traps were left out and 5 others set south of camp for squirrels as numerous trails were seen and occasional telltale "cheep" heard indicating their presence. During the day 2 squirrels were trapped.

A single warbling Vireo and Ruby crowned Kinglet were seen in the Mesquites today when I went out to the slough after lunch a Cinnamon teal, and about 10 Coots were seen.

I set my traps thru the Mesquite covered Hummocks about  $\frac{1}{2}$  mile south of camp this evening.

The place looked very good for small mammals tho tracks were not abundant.

About 11:30 p.m. I was aroused from my bed by Aunt May yelling and discovered the camp was being robbed by an Indian dog. After retrieving the purloined bacon I lay awake for some time and saw numbers of large bats flying about in the dim star light. During the past two evenings no bats had been observed flying during the twilight hours and I judge they must been in caves in the foot hills too far away to get here early.

April 23rd 1922

My traps empty and the Schylers held two *Neotoma i. desertorum* and one *Dipodomys deserti*.

The day dawned very windy and kept up until after lunch.

In the middle of the afternoon my attention was called to a red bird perched on the tip top of a dried Mesquite about 50 yards from camp. I grabbed the gun and was soon in pursuit of a ♂ Vermillion Flycatcher. It proved to be so wild that I could not get within gun shot of it and after changing perches twice, took wing and was seen no more.

No traps were set this evening as tomorrow we leave for Hanaupah Canyon in the Panamint M.

April 24th 1922

We were all up and busy by 5 a.m. and breakfast was waiting when Williams got in with the burros.

The burros seemed to be unusually wild this morning and it took the combined efforts of 3 people to get them caught. As I ran around a Mesquite that was growing near a small pond, heading off a burro, a Black-crowned Night Heron flushed from beneath the water.

The saddling and packing went with dispatched promptness but a five minute delay after the animals had been turned loose for the trail, made trouble. Two of the beasts got their packs together, pulling in opposite directions dislodging one of the packs and resulted in repacking the load.

Our trail to Hanaupah Canyon led west from Eagle Borax and up the detrial slope of the wash.

The wild flowers on this rocky slope showed plainly the effect of the heat during the past few days and that summer was close. A few migrating Brewer Sparrows were seen as I passed along tho they were very scattered and only in small bunches & far from reach.

The farther up the wash we went the dimmer grew the trail until, I being in the lead, lost it. Williams was out of his saddle and having a very difficult time keeping



the pack animals going right. Trouble was inevitable with such rough going as the wash was full of large round boulders some of them tall enough to upset the packs. William's sullenness, which he had been evident for the past week, culminated in some harsh remarks and was a great surprise to me.

Near the mouth of the canyon the wild flowers and shrubs were at their zenith as the scorching heat of the lower level was still being checked by the snowy peaks of the Panamints and the moisture had not been drawn from the soil.

Creosote brush still predominated in the shrubs & a species of Desert sunflower (like our coastal Blackeyed Susan) which grows in the low upper Sonoran zone, was blooming abundantly thru the wash giving the place a tinge of golden yellow splendor.

Plant life was again scarce & lacking when we entered the canyon which in places was but precipitous rocky walls and a boulder-strewn wash. About a mile from the mouth, the canyon forked, our branch going north west and the other south west. We took the south west branch as there are large springs near the head of this fork. Here, two of the burros played out and their packs were shifted to two saddle animals. This made it necessary for two of us to walk and that fell to Williams and myself. As I passed near a rocky slide the nerve-racking buzz of a rattlesnake was heard close by, however the reptile but played his own funeral dirge as I chopped a large rock on his head in payment for the chilly scare he gave me.

The narrow rocky canyon seemed never ending as we plodded along, tired and weary with the burros straying from one side of the canyon to the other.

A faint chirp from a bush top proclaimed the presence of birds and a step or two from the trail revealed a pair of Black-throated Sparrows scolding the burros. These were the only birds noticed in the canyon.

Hanaupah Canyon lay east and west with the drainage eastward into Death Valley. This gave a very good example of slope exposure as the south slope on the north side of the canyon still retained a scattered growth of Creosote while the north slope on the south side was almost bare and but a few unidentified shrubs growing amongst the rocks.

After traveling about 2 hours a faint dampness was noticed on the canyon floor and soon the last of the sinking stream was found in the sand.

The burros scrambled about and got a few sips of water. This revived them considerably and they again went on with a refreshed vigor.

In a short distance the stream began getting larger and soon developed into a turbulent mountain stream clashing over the rocks. Soon, where the subterranean water was accessible by their roots in summer, small willows were found and the aspect of the canyon began to change rapidly.

It was now about 4 p.m. and on a steep south exposed hillside we found a place where some prospectors had hauled off places for two small tents so camp was established.

Here the wild flowers were simply beyond description - reds - blues - yellows in all their shades, were growing in patches thru the Creosote on the south exposure, while the north exposure was covered with low shrubs, hardly yet in leaf. To the west, Telescope Peak towered in snow clad splendor making a scene that rivaled the Sierras in beauty.

The noisy creek rumbled over the boulders thru a dense growth of willows now in full leaf interlaced with a tangle of grape vines and poison ivy.

As soon as the burros were unpacked Williams flopped down on a pile of saddle blankets, leaving Aunt May & I to adjust camp. This, however, we did cheerfully in the interest of the trip.

I set a short line of traps out on the hillside above camp.

April 25th 1922

My traps held two *Perognathus formosus* and 4 *Peromyscus e. stephensi*, a fair catch for 25 traps! After breakfast we set up camp using large willow poles to support an awning with which to ward off the hot sun. While I was cutting willow poles a brilliant ♂ Western Tanager was seen perched on a nearby Creosote bush.

I then put up my skins and wrote notes. Williams went up the canyon while Aunt May scouted about thru the creek bottom.

Williams upon his return reported gopher work about an old deserted Indian farm up the canyon so after lunch Aunt May and I went up there, taking all my gopher traps and our guns.

The place was about 3/4 of a mile west of camp and proved to be another wonderful example of slope exposure. The north slope had junipers coming almost to the canyon floor while the south slope had its Creosote and gorgeous decking of flowers. So abundantly were they

that 10 varieties were counted by me within the area of one square yard. But, strange to relate, when you were some distance away, they blended so perfectly with the brown & grey rocks of the hillside that you could scarcely detect their presence.

A large spring gushed from the north exposure on the south side of the canyon, about 100 ft up the hillside above the creek, causing a large moist place of considerable extent. I searched this place carefully for gopher signs but not one could I find. Indeed the place looked propitious and they could possibly have lived there some long time ago but certainly were not there now. It could be possible that the Indians, who had terraced off this hillside below the spring for their gardens, had trapped them for food, causing their total extermination. The places seen by Williams were caused by coyotes or foxes digging worms in the moist soil and upon careful search their obscure foot prints were seen.

Someone during the past two years had started a fire along the creek burning off the willows for about half a mile giving me a good chance to search this narrow canyon floor for gopher signs. I found no sign here, so gave the prospect of catching gophers in this locality up.

In several places along the stream large patches of rushes were growing and I looked about them for Meadow Mice. No trails were visible but the prospect of shrews gave me the determination to try my small traps thru them.

The old Indian camp site was a terraced place along the south exposed hillside and an acre of flat leaved cactus (*Opuntia*) were growing to the west. The *Neotoma* i. desertorum had lost no time in occupying this splendid protection and their stick and horse dung collections were seen near the roots of every cactus plant.

Fresh Mountain Sheep tracks were seen all about on both sides of the canyon and looked like a bunch of ewes.

Birds were extremely scarce and I saw but a single Pileolated Warbler and a single as I scrambled thru the willow bottom and both birds were too close to shoot.

Aunt May fared better, for as she scrambled up a rocky gully a Costa Hummer was flushed from its nest situated in a creosote bush on the hillside. She shot the ♀ and collected the first set for the season.

It was getting toward sunset so we hurried back to camp so the traps could be set.

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I set the traps on a small brush on the north exposure, amongst the low shrubs, while Williams set two small steel traps near the rock slide closest to camp. When I was about half way through my trap setting he caught up with me and commenced to talk about the financial agreement of the trip and after a conversation of some short period set forth a demand of \$5. per day.

This piracy took my nerves and I gave him no definite answer upon which he threatened to quit.

It certainly was hell to see all your careful plans knocked down by some damn I.VV. VV. who as long as the food came regular and no work to do accepted your hospitality and fair wages.

April 26th 1922

A sleepless night ensued and the traps held but a light catch - two *Perognathus formosus* - three *Peromyscus c. stophensi* & one *Peromyscus m. sonoriensis*, the latter species seems to be scarce in this locality, quite unusual as they are generally the most abundant mammals caught in desert canyons.

After breakfast I had a serious talk with Williams and sent him out with a letter to headquarters. However, I expect the Panamint trip to fall thru as he refuses to carry on for less than the \$5. per day.

While I was getting up my skins, Aunt May went up the mountain side above camp and found another Costa Hummer nest situated in a Creosote. A further search revealed the partly completed nest of another Costa and still another ♀ carrying material to her unfinished nest farther up the slope. Flowertime is Costa time!

A pair of Black-throated Sparrows seemed interested in a patch of thorny bushes but a long watch and a careful search of the place revealed no nest. Finally the male was collected.

I strung out my traps in two sections this evening - part of these thru the rushes along the creek and a short line above camp thru the rocks & Creosote.

Several Schylers were baited with bacon and strung out close to the rocks in hopes of catching a *spilogale*.

April 27th 1922

My creek bottom traps held only two *Peromyscus m. sonoriensis*, but shall try the locality again as I hope to find shrews there. The line along the hillside held but an immature wood rat. An adult of the latter species was caught in a schyler. This was a disappointing catch and with no birds around makes the day terribly irksome.

Aunt May went up the mountain side hunting nests and while out heard the racket of a flock of Pinyon Jays. Peering about she saw them high over head flying from one peak to another.

Williams arrived about noon from his valley trip and was in an iniquitous mood, certainly this cannot continue always, tho Aunt May and I have determined to kill the meanness with kindness.

At lunch he became a bit talkative and informed me that ~~xxx~~ Tom Wilson, an Indian living at Eagle Borax, had worked the garden near the spring on the hillside 3/4 mile above camp, about two years ago & had trapped gophers. This may account for their extermination, tho on the strength of the story Aunt May & I went up there this afternoon again spending about two hours looking over the small area. We even took sharp pointed sticks, stabbing them about in the rocky soil in hopes of finding underground runways, but all in vain. One very old hole was discovered and I set one trap but have no hopes of its success.

Near by two male Lazuli Buntings were seen and we tried to shoot them but they were too wild & flew far up in the mountain side out of reach.

While searching for gophers, a Prairie Falcon flew past.

Getting back to camp about sunset I again set forth with the traps. About 35 of them were meat baited and set thru the rushes in the creek bottom and all the rest, about 50, were strung up the north ~~xxxx~~ exposure on the south side of the canyon.

While eating supper a poorwill was heard near by. I took the flashlight & gun but was not successful in locating the birds.

April 28th 1922

My creek bottom sets held three Reithrodontomys which were taken on the moist ground near the rushes and one each of Perognathus formosus and Peromyscus c. stephensi which were taken where my line bordered the rocky canyon side.

The traps on the north exposure held five Peromyscus c. stephensi, one wood rat and one P.M. sonorensis. The latter animal looked so very peculiar that for the present I shall call it "anonymous" in the serial.

Aunt May went bird hunting and after a couple of hours returned with but a single Black-throated Grey Warbler. She shot an Alaskan Piliolated Warbler but it fell into the rushing stream and was lost. Birds were very scarce and she saw but three other individuals - two Green-backed Goldfinches and a Western Gnatcatcher.

After getting up my skins I hiked up the mountain north of camp so I could see the north face of Hanaupah Canyon. So steep was the slope that I was two hours climbing it and was 1400 ft higher than camp when on the summit.

~~It was interesting to find what a fine example of zonal contrasts.~~ I climbed to the summit of a small rocky peak and the view from this vantage point was very scenic. A heavy blue haze hung over Death Valley making the mountains which bordered the eastern side almost obscure, but the white salt marshes and the small Mesquite patches scattered about stood out prominently shimmering with heat.

The snow capped peaks of the Charlston range in Nevada were clearly visible. The rocky gorge of the north fork of Hanaupah lay below on the north and was even more desolate than the canyon in which camp was situated.

There was a rushing stream pouring down the rocky creekbed but the willows seemed lacking as far as I could see.

The south exposures on this mountain side seemed almost void of plant life as great rocky ledges with their resulting slides of loose rocks prevented much growth.

The most inspiring scene however was the view obtained of Telescope Peak with its large snow banks and deep snow filled ravines running down its sides into the narrow rocky canyons which from my observation point looked like they were bottomless and the desire to sail over them or roll huge rocks down the precipitous sides possessed me.

The belt of Pinyon Pines was plainly visible and about half of this tree zone still lay within the snow banks.

The day was just passing and I dared not linger too long on this scenic feast so I turned reluctantly back ~~down~~ towards camp.

It was interesting to find what a fine example of zonal contrasts prevailed on the summit as the change from the low brushy creosote, south exposure with its carpet of annual vegetation to the north exposure with its covering of sage brush & Juniper occurred within a distance of 10 ft. and the change was complete with no intermingling of the vegetation.

On this summit I saw three pairs of desert sparrows, which were settled for their summer homes and several migrant birds were seen.

I collected one Desert Sparrow, one Audubon Warbler, one Empidonax and one ♀ Costa Hummer. These were the only birds which I could get within range of.

Mountain sheep tracks had been everywhere and looked like they had been recently made.

Several white-throated swifts were seen speeding about the face of a cliff on the mountainside and a Western

red-tailed Hawk was seen sailing high overhead.

As I was descending I saw a Prairie Falcon and a pair of ravens flying over the canyon. I made the return trip in just 25 minutes.

Traps were set thru the same locality in which I trapped last night and up a steep slope on the north exposure farther east.

Williams returned to camp much elated, having located a good prospect of Manganese and silver ore nearby.

April 29th 1922

My traps held two immature *Neotomas l. desertorum*, two *Peromyscus m. sonoriensis*, seven *Peromyscus c. stephensi* and one *Reithrodontomys*.

The latter animal was caught well upon a rocky slope and the only answer I have for its presence there is, that within the past few years a cloudburst had taken all the vegetation from the creek bottom nearby and probably a few Harvest mice lived in the banks above the ravages of the flood and having no other place in which to find subsistence took up their abode amid the rocks conforming their mode of living to meet the surrounding conditions.

Aunt May went hunting along the creek. She found birds, as usual, very scarce getting only one each of Ruby-crowned Kinglet, Townsend Warbler and Alaskan Pileolated Warbler. One other Kinglet and a Western Gnatcatcher were seen.

I had just finished my animals when she arrived so I put up the few birds.

I strung out the traps over the rocky bench on the north exposure southwest of camp this evening.

While setting them a bat flitted past. This was the first one noticed in the canyon to date.

Several Poorwhills were heard but the ground was so rough ~~xxxx~~ that a steady focus could not be maintained with the flashlight and we were not successful.

April 30th 1922

My traps held six *Peromyscus c. stephensi* and two *Perognathus formosus*, a very poor catch considering the fact that I had 84 traps out.

After breakfast Aunt May & I went hunting up the canyon. Birds were very scarce. I collected a sharp-skinned hawk and Aunt May shot a Western Chipping Sparrow.

A flock of about 15 mourning doves were seen flying

in the canyon. Birds seen were one Lazuli Bunting, a rock wren and a Say's Phoebe.

We followed up the stream to its source, a very large spring which gushed out of the rocky canyon well about 20 ft. above the creek bed. It was a most beautiful sight and without doubt the prettiest spring I had ever seen.

Near the spring in the rocky gorge the melodious trill of a Canyon Wren was heard and after some time the songster was heard again high up over an inaccessible cliff. I waited about half an hour, in hopes of getting a shot at the bird but it never came within gun range.

For about a quarter of a mile the rushing stream cascaded down the canyon and several beautiful waterfalls were seen.

I was surprised when seeing the source of the stream to find that it ran on the surface only about a mile &  $\frac{1}{2}$ . This feature in itself would make bird life extremely scarce and when the fact, that about half of the willows had been burned off, was remembered, it seemed but reasonable that bird life should be reduced to a minimum.

As we were returning another Canyon Wren was heard upon a very rocky, rocky canyon which branched off to the southwest, and as I was peering about between the narrow perpendicular walls, a Western Belted Kingfisher flew past. I took a chance shot at it but missed. The report of the shell reverberated thru the canyon frightening the Wren so badly that it was not heard again.

A Cooper Hawk was seen near the old Indian ranch as we were returning and as I crossed the stream I saw a Towhee warbler directly over my head in a willow.

Traps were set on a north exposed hillside east of camp.

Upon my return to camp at dusk several Poorwills were heard and again we tried "Jacklighting" them. Success was with us this time and a ♂ specimen of *Phalaenoptilus n. nuttalli* was recovered.

May 1st 1922

My traps held a very light catch three *Perognathus formosus* and three *Peromyscus c. stephensi*. I have this place worked out so tomorrow we move.

Aunt May hunted up & back the length of the willows this morning and killed a female California Yellow Warbler. She stalked a ♂ Lazuli, probably one of the two from up the canyon but he proved to be wild. The only other birds seen were two green backed Goldfinches and a single Ruby-crowned Kinglet.



On dissecting the Poorwill which I had shot last night I found her to be almost ready to lay - the yellow yolk measuring 15 mm.

About noon Williams came down to the creek where I was skinning and as he went to leave I chanced to glance his way & saw a large red rattlesnake within a foot of him. I let out a lusty yell and together we put an end to the snake.

After getting my skins finished we commenced to pack up.

May 2nd 1922

We made an eight o'clock start this morning with the Eagle Borax as one destination for the day.

As the caravan moved slowly down the canyon many Mourning Doves were seen.

Near the mouth of Hanaupah Canyon several straggling migrants were seen, several Western Chipping Sparrows, a few Brewer Sparrows, two Ash-throated Flycatchers and a male California Yellow Warbler. More birds were seen scattered thru the creosote near the canyon mouth than I had seen during the week in the canyon. This was probably due to the fact that the sunflowers which were growing in abundance here, held much insect life.

That Spring had passed and summer was advancing was shown plainly by the vegetation as already the glorious, golden sunflowers had turned their faces to the earth so the fertile seed could fall & find their resting place, awaiting the next growing season.

The day was extremely hot and the farther down the aluvial wash towards the valley floor we rode the more noticeable was the heat. The water in the canteens became almost too hot to drink, so hot that the mouth of the canteens burned the lips when ~~when~~ touching.

We arrived at Eagle Borax about 3:30 p.m. a tired and weary party.

On my planning for the trip to Hungry Bill's Ranch next day Williams refused to continue the work and even tho I tried to get him to go on, my offers were spurned.

May 3rd 1922

His mind hadn't changed during the night so we packed u p & turned back towards Furnace Creek.

The ride back was a doleful affair and hardly a word was spoken except to the burros, during the day.

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Things came to a climax after supper when Williams wanted his pay and I talked with him in a stern manner, holding to a promise I had made him when at Eagle Borax & that was for him to send his bill in to headquarters for settlement as I wouldn't pay for unfinished work.

May 4th 1922

The day was a scorcher and the thermometer reached the 100° mark about half past eight, remaining above it until about 1:30 p.m.

The day was spent getting my outfit and supplies out of Williams' pack boxes.

A single <sup>♂</sup> Phainopepla was seen flying past late in the afternoon.

I set a line of traps thru the Mesquite covered Hummocks, north of camp in hopes of catching another *P. p.stepheni*.

May 5th 1922

My traps held 1 *Perognathus formosus*, one *onychomys*, two *Dipodomys deserti* and one small cottontail Rabbit.

The latter animal was caught in a mouse trap, the first one ever taken that way in my trapping experience!

The day was another scorcher and a note of interest regarding heat was that at 12:30 last night being too warm to sleep I looked at the thermometer and found it registered 98°. How long I can stand this place I do not know as many more nights like the one just over will put me out.

The ranch truck went up to Ryan about noon and I caught a ride up so got a report off to headquarters and the Ford out of storage - gasoline fumes never smelled so good before.

May 6th 1922

My traps held one *onychomys*, 4 *Perognathus formosus*, one *Peromyscus e. eremicus* and 3 *Dipodomys deserti*.

So hot was the day that one of the latter had spoiled before I could skin it, even tho I had disembowled them before sunrise.

The flies seemed extra abundant today & combined with the heat made life miserable.

I tried a new locality this evening for my trap line, setting them in the narrow sandy streambeds thru the wash out of Furnace Creek about 1 mile south of the ranch.

When passing thru the place on burroback I had noticed lots of small mammal sign amid the small annual plants growing in the sand.

This alluvial wash was of a very rocky composition with only an occasional Desert holly growing about. Certainly a place you would think to be void of life!

May 7th 1922

A violent wind from the south sprung up during the night blowing the bait off many of the traps. However, I had a fine catch which included the following - two immature *Perognathus formosus*, three *Dipodomys deserti* & 4 *Dipodomys m. merriami*.

I was very interested to find how dark the latter animals were when getting on to thoroughly de-mineralized ground, such as this water washed slope, on which I had trapped last night.

The wind continued to race up the valley stirring up the dust in such quantities that the hills on either side were obscure. This wind was like the "Breath of Hell" and the thermometer registered 95° at 9 o'clock. Try to imagine how we felt with this sand settling all over you when covered with perspiration - as for myself 00 sandpaper was the nearest simile.

An indian informed me of a packer who arrived in Eagle Borax yesterday and might be engaged so I drove down there this afternoon. I found him to be another indian and of such an appearance that I would not trust him so no deal was made.

The wind was blowing so hard that I did not set traps this evening.

May 8th 1922

The wind blew violently all night long and at dawn was threatening to grow worse - which it did. All day long Aunt May & I huddled beneath a scrubby mesquite trying to keep out of the hot wind and all the food we had was cooked on the stove in the ranch house. \*\*\*

No traps were set this evening.

May 9th 1922

The wind still blowing from the south increased its velocity tho not like yesterday.

\*\*\* The average temperature during the day was over the hundred mark and with the dust and wind the day was as dreary as any I have ever endured.

May 9th 1922 cont'd

About 10:30 it lulled almost to a dead calm and large banks of clouds commenced to gather over the mountains towards the north.

Not having any skins to work on I took my gun and went hunting on the ranch.

A large number of Cliff Swallows had come in with the wind and were taking advantage of the calm period to catch a few flies. I collected one and later the small indian lad hit one on the "fly" with a stone. He seems to be an expert shot with either a sling shot, bow & arrow, a hand-thrown stone or a gun.

The only other bird seen excepting English Sp. was a single ♂ Black-headed Grosbeak which I shot.

I had hardly commenced to skin the few birds collected when the north wind began to blow and the clouds which had looked so ominous in the north began to envelope the landscape.

The temperature fell rapidly from about 80° to 54° in less than an hour and with the wind rising with every gust. Certainly this place is the Pandemonium for the Feinds (sic) of Hell!!

About sundown the wind grew worse than ever and dust was blown up so bad that the hills were again invisible.

No traps set this evening!

May 10th 1922

The night was unpleasantly cool and when I arose this morning the thermometer registered 48°. The sky had cleared during the night and the mountains all about were white with snow!

Such was the storm in May for Death Valley - heat - cold - wind - snow, all within 48 hours.

I had separated the unnecessary articles from the equipment during the storm and it was decided to pack them up and send them back today.

While busily engaged building a crate Aunt May called my attention to a Brown Crane flying over. It appeared to light in the fields so I lost no time getting my gun and pursuing it. Unfortunately I never saw the bird again, but I picked up another Black-headed Grosbeak and one of each Barn and Violet-green Swallows.

The flock of Swallows had greatly increased in numbers during the night and included in the bunch were 4 species - Cliff, Barn, Violet-green and Rough-wing. Many white-throated swifts were speeding about, all too fast for my marksmanship!

Hundreds of Mourning Doves have assembled here recently and the indians certainly lose no chances to slaughter them.

A lone Spotted Sandpiper was flushed from the irrigation ditch and collected.

I left for Ryan about noon and Aunt May went hunting while I was away, collecting a white-crowned Sparrow, a ♂ Calif. Yellow Warbler and an immature Yellow-headed Blackbird from a small mixed flock of redwings.

I arrived in camp about 5:30 and the wind again was blowing a gale from the south, making trap setting impossible.

May 11th 1922

The day dawned still and beautiful and again I was struck with rapture. How can any place be so hot, so cold, so windy and then be calm and beautiful? Even the barren sunscorched hills, with their deep shadowy canyons seemed to be bathed in softness this morning! Quite possibly its the temperament of the human breast who raves at the storm in his despair and then when the beauties of nature display themselves, drinks them in with an ardent thirst, missing not even the meek offering the rounded hills, which in a summer day would strike terror to the strongest man.

I took my gun and went down into the fields to search for the Brown Crane. Apparently he left for good yesterday as I did not find him about this morning.

While I was slipping carefully about keeping behind the hedges of arrow weed which grew along the fences I saw a male Western Blue Grosbeak. I dared not shoot him as I was after bigger game.

Three white-faced Glossy Ibises were standing near a pool in an unplowed field and by keeping behind a tree when approaching them, I was able to get within long range. With two charges of heavy shot I winged one specimen, a fine male in brilliant plumage.

The only other noteworthy bird seen this morning was a Lewis Woodpecker which I collected from the upper limbs of a large cottonwood tree.

The Swifts and Swallows were especially active this morning persuing their favorite flies from about the tree tops.

In the middle of the afternoon Mr. Ceballos, the ranch foreman came running over to camp proclaiming the presence of a strange bird perched on the chicken yard fence

I immediately responded, gun in hand and was surprised to find a very shy Anthony Green Heron causing the chickens much distress.

I pursued the newcomer until it gave me the "slip" in the fields below the corral.

Near the corral I flushed a small flock of mixed Blackbirds which included a few of each Cowbirds, Nevada Redwings and Yellow backs.

Two shots brought down two Yellow headed Blackbirds and a male Cowbird while the rest of the flock left in a northerly direction.

Bats were especially active this evening and 5 were collected.

Every quiet evening since my return to Furnace Creek Ranch there has been queer bats squeaking in the Mesquites about camp and always very late. I have tried every way conceivable to capture some of them but without results. This evening about 9:30 one was heard directly overhead and seizing the flashlight I tried to locate the beast but even this expedience failed.

May 12th 1922

I made an early survey of the bird population about the fields and found a half dozen female Nevada Redwings feeding near a pool below the barns. They were very shy and a long shot with the 12 gauge dropped two.

Almost all the swallows had vanished this morning and only about a dozen Cliff Swallows remained.

I found the Green Heron in an irrigating ditch near a lower alfalfa field. His vigilance was doubled this morning and he flushed when I was a hundred yards distance. However I pursued until it unwittingly perched in a small dead tree, to which I could find cover to creep up on, and a dose of heavy shot reaped the specimen.

Two Black-crowned Nightherons and two Wilson Snipe were the only other migrants seen this morning.

Near the barn I found an almost complete nest of Bullocks Oriole hanging in the drooping limbs of a Cottonwood.

There are three pairs of these beautiful birds about and they are highly prized by the Ranch Foreman.

While I was busily putting up my skins a mud hen walked down along the irrigating ditch which ran near camp.

The bird seemed unusually tame coming within 10 ft. of me. It stayed about nearly an hour and was never seen again.

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This place seems a mecca for lost stragglers, they put in for a short time, get rested and resume their journey.

The Warbler migration was hardly noticeable tho it may have happened during my absence but the flycatchers which usually follow were noticeable by their absence.

Just before leaving to set my traps this evening, many Texan Night Hawks were seen flying about and two were collected.

Traps were set up Furnace creek about 5 miles in the ~~bx~~ field and then walking down against the Funeral Mts. on the mesa. This locality was near where I had trapped successfully for *Perognathus p. stephensi* during April.

When I returned to camp after dark an Indian lad brought me one of the Black-crowned Night Herons which he had killed.

He thought it was a crane and was expectant of the dollar I had offered for its capture. The true identity disappointed him and he gave me the heron.

May 13th 1922

My traps held an abundant catch, 18 *Perognathus formosus* and an immature *Peromyscus c. stephensi*.

This latter specimen proved unusually interesting, as upon dissection I found her to contain two embryos and the mouse itself was still in the immature blue pelage! The reproductive organs of the mice in this region certainly start functioning early in life!

While I was at work with my specimens the little Indian boy came by with a Virginia Rail which he had killed with his Bow and arrow. He quickly released his ownership of the bird in exchange for a dime.

The day was frightfully hot and about eleven a.m. the thermometer registered 116°.

While we were eating our frugal lunch a *Peromyscus a. eremicus* was seen emerging from the depths of a large pile of empty tincans under the Mesquite in camp, with a large hairless young one in the mouth. She stopped a second or two to see if all was safe and then quickly darted behind a small box end that helped support a small wind break about the camp. Evidently something had disturbed her nest in the can pile and she sought a place of greater safety for her offspring.

She soon came to view again from behind the box end but our murmuring whispers frightened her and she sank from sight to be seen no more.

She did not grip her young one by the nape of the neck as dogs do their young when transporting them to a new nest, but had the youngster by its middle in the full depth of her mouth.

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While I was at work during the afternoon an indian boy came into camp and seeing the Night Heron asked for it. I had so much to do that I gave it to him and he departed in joy with the expectancy of "Big Soup" in camp tonight.

I set my traps again this evening a little higher up than where I had trapped last night.

May 14th 1922

I put in a miserable night as it was so hot I couldn't sleep. Arising at eleven p.m. I looked at the thermometer finding it to register 98°. I surely cannot endure such weather long.

A refreshing dip in the ditch helped some and I caught a wink or two before the reveille 4 a.m.

My traps held 9 *Perognathus* of which one was the much desired *stephensi* and 2 *Peromyscus e. eremicus*.

The day was a scorcher and by 9 o'clock the thermometer was 115°. Watching this instrument is the chief indoor sport these days!

After the skins were completed we started packing up as the afternoon temperature of 118° was too much - too much!!

About 3 p.m. a violent north wind commenced to blow and by 6 this evening it was raining! The temperature was slightly reduced by the downpour for upon looking at the thermometer during the storm I found it to register 82°. "A dry rain" indeed notwithstanding the fact that every thing was soaked with the 0.6 inch of rain fall, by bed time all was dry again!

May 15th 1922

An eight-thirty start was made, leaving the valley by way of Furnace Creek. About 10 miles up Furnace Creek, when stopping at the watertank to cool off the Ford, a lonely Western Meadowlark was seen - lost - I took it as he sat on the top of the Auto Club sign post and twitched his tail and craned his neck, eyeing me criticly, all the while emitting a short purr, which seemed to speak of distress rather than alarm.

When turning into the canyon which led up to Ryan a single ♂ Western Tanager was seen.

After passing Ryan the road led thru a narrow rocky gorge and the road bed was only the deep sand of the washes. This made hard pulling for the Ford but it struggled along without much boiling.

This narrow part of the canyon was about six miles long and then opened out into Greenwater Flat.

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After traveling a mile or so beyond the narrow canyon we stopped for lunch and while busy munching crackers and deviled ham the keen eyes of Aunt May saw a Black-throated Sparrow emerge from a small bush some 50 yards off the road. The bird's broody actions aroused Aunt May's curiosity and upon inspecting the bush a nest and three slightly incubated eggs were found.

Greenwater Flat proved interesting as on ~~xxxxxxx~~ searching about I found many indications of animal life.

The place was a long gentle sloping valley completely covered with Bench grass, wildflowers, creosote and several other species of thorny brushes and about 15 miles long, laying between two parallel low weatherworn mountain ranges running northwest to southwest.

The range which bounded the valley on the west side, and appeared but low round hills, also bounded Death Valley on the east, but had an entirely different aspect when viewing it from that point.

The roads were splendid and the Ford sped along at 25 miles per hour without a rattle.

While feasting our eyes as we rode along on the glorious display of wild flowers which carpeted this valley, Aunt May let out a "Whoop" having discovered a most wonderful lily growing near the road.

Stopping it was found to be the Red Sego lily and the first one I had ever seen.

The soil of this valley was full of small pebbles tho extremely fertile as the luxuriant vegetation showed. The place would make a wonderful ranch if sufficient water were available.

A small spring is marked on the topographical sheet a couple of miles south of the deserted mining camp, Greenwater, and I resolved to find it hoping that I might be able to spend a few nights trapping in this fine valley.

At the Auto Club sign post I found the direction to the spring and turned west up the slowly rising slope. Passing the old mining camp of Greenwater, now only a mass of broken liquor bottles, some old stoves and other things discarded by the people who once inhabited the place, I turned south into the rolling hills, where the spring was located.

It was found to be an old mine tunnel which had been concreted up to store water, in much the same way as a cistern, tho the tunnel was dug into the hill on the level and probably had a very small seepage of water to keep a constant limited supply.

I was very glad that water was available and after looking about, turned back, pitching camp at Greenwater.

I strung out my traps near camp this evening and while I was away Aunt May found another Desert Sparrow's nest with four heavily incubated eggs.

My traps held a fair catch, one *Dipodomys m. merriami*, two *Peromyscus m. sonoriensis*, five *Perognathus b. bangsi*, two *Onychomys* and one *Perognathus formosus*.

The *Onychomys* were interesting and apparently the blue short-tailed species.

I spent the morning fixing up camp, building a framework of 2x4's, which were scattered about the place, over which I stretched the tent fly for an awning.

Aunt May went nest hunting, finding one n/3 badly incubated Desert Sparrows, another with 3 small young, and one n/4 heavily incubated Sparrows.

A lovely Mockingbird whose nest must be near camp, sang all night long in the moon light, in fact the only intermission he gave was a few hours after sunrise while appeasing his hunger.

Traps were again set near camp this evening and while setting them a Poorwill was flushed. Immediately both Aunt M. and I were in a state of exstatic joy as we both thought a nest was nearby there. Tho a thorough search followed no eggs were found.

I saw a single Green-tailed Towhee when hunting nests.

May 17th 1922

My traps held six *Perognathus b. bangsi*, one *Perognathus formosus* and one *Dipodomys m. merriami*.

I had noticed a scattering of old gopher workings thru the brush so after I had worked up the few skins I set my gopher traps.

Considerable trouble in finding used burrows was encountered, as the animals seem to fill up the holes behind them rather than throw the debris on the surface in the shape of a mound.

I then wrote a few letters and drove back to Ryan.

I set my traps again this evening in the vicinity of camp.

Upon inspecting the gopher traps at sundown I found one ♀ captured.

While I was away to Ryan Aunt May went nest hunting finding a fine set n/5 of Desert Sparrow, 2 nests of young ones, a LeConte Thrasher with 3 small young, a Mockingbird with 4 pipped eggs and a White-rumped Shrike with 5 slightly incubated eggs.

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May 18th 1922

My traps held three *Perognathus l. bangsi*, one *omyschomys*, one *Dipodomys m. merriami*, one *Perognathus m. sonoriensis* and a fine ♂ gopher.

The wonderful weather which had been enjoyed for the past few days came to a sudden end today when a violent south wind filled the sky with clouds and almost wrecked my frail building.

The wind kept up in violent gusts all during the afternoon and in the evening seemed to be gaining in violence so no traps were set.

May 19th 1922

The wind still blowing violently, making it impossible to do anything except try to nail up the shack a bit.

The wind abated during the afternoon and both Aunt May & I went nest hunting. Our efforts were futile, however, as the wind still blew enough to keep the birds under cover.

I found a single Sparrow nest with 4 pipped eggs tho I did not discover the fact until the nest had been removed from the bush. However, I tucked it back as best as I could & the brooding female went back to it as if nothing had happened.

Aunt May located a ♀ Costa hummer valiantly protecting her nest and single fresh egg from destruction by the wind as the tiny structure was placed on a small limber creosote bush which was being whipped about in a terrific manner by the gale.

Looking at my gopher traps again about sundown I found another specimen had been captured.

Traps were set well down into the valley this evening almost a mile from camp & the association was found to be still like that about "Greenwater."

May 20th 1922

My traps held the ordinary catch this morning 5 *Perognathus l. bangsi*, three *Perognathus formosus*, one *omyschomys* and two *Dipodomys m. merriami*.

My gopher traps were empty so I picked them all up and ~~xxxxxxx~~ spent about three hours searching for new burrows in which to reset the traps. Surely tedious work as only one good runway is found in about six holes dug into.

After getting my skins up Aunt May took her washing and drove up to the spring.

Here I noted several pairs of birds and was positively frightened when a ♀ desert quail flushed from a bush directly under my feet.

About 30 gallons of water were brought back to camp in a collection of cans and bottles that had been picked up around the old town.

Near camp this evening Aunt May found another Desert Sparrow with 4 slightly incubated eggs and on looking at the hummer discovered yesterday found the bird.

As I was driving down towards the valley floor a lone Western Tanager flushed from a Creosote beside the road.

The hummer had laid her other egg this morning so Aunt May collected the set.

I set my traps 2 miles east of camp this evening at an elevation of about 3900 ft. The place was lower than the Creosote zone and the thorny brush predominated, while the soil was completely covered with small chipped rocks.

Not much mammal sign was seen but I expect to find at least one more species of *Dipodomys* in this valley and I am positive that at least a sprinkling of them occur in this change of association.

Returning two Poorwills were flushed from the road where the lights of the Ford had blinded them there until they were almost run over.

May 21st 1922

I was pleasantly surprised to find the desired *Dipodomys* had been located as six specimens were in the traps - also one immature *Onychomys* and a *Peromyscus m. sonoriensis* were taken.

My gopher traps held a single ♂ gopher. Very little returns for the extra effort expended yesterday.

One of the Sparrow nests with young discovered by Aunt May seemed especially fine for pictures & I had trimmed it out during the past few days. So after finishing my work I took my camera and tried for a few pictures. The birds proved to be such admirable subjects that I postponed the taking of many exposures and will return tomorrow at a more propitious time of day. That early morning sun with the slanting Rays.

I looked over the gopher traps late this afternoon finding two animals had been caught.

As I was going down to set my traps I saw a ♀ Western Tanager - and while I was setting them the plaintive mythical call of a male desert quail was heard from a hillside not far distant. Quail are rare here as in all my roaming about this place but one has been seen and one heard!

The traps were again set in the same vicinity that I had set in last night.

May 22nd 1922

My traps held three *Dipodomys*, three *Perognathus l. bangsi*, two *omys* and two *Peromyscus m. sonoriensis*, and the gopher traps held the astonishing number of three specimens!

I made a number of pictures of the Desert Sparrows this morning and they posed magnificently so I should have a few good pictures.

Aunt May down sick this morning with a high fever which she claims is due to the water. I did not feel especially well but thought that it might be the hangover of hay fever which I have been suffering with during the past few days.

She hobbled out of camp late in the afternoon and collected the n/4 Desert Sparrow which had been left on the chances of another egg.

I set my gopher traps again as I had picked them all up this morning.

The mouse traps were set again in the near vicinity thru which I had trapped during the past few nights.

May 23rd 1922

My traps held 5 *Perognathus l. bangsi*, five *Dipodomys* and two *Peromyscus m. sonoriensis*. My gopher traps were empty so I moved part of them to some fresher workings.

We proofread all the specimens and commenced to pack, preparing to moving as the water had begun to have bad affects on me - being worse than strong epsom salts.

I set the traps again thru the same locality this evening and as we were returning to camp after dark Aunt May shot a Poorwill which had become blinded by the lights of the Ford.

May 24th 1922

My traps held a splendid catch this morning and the day looked very industrious for me even tho I was not feeling my best. Included in the catch was five *Dipodomys*, six *Perognathus l. bangsi* and one *omys*, while the gopher traps near camp held two specimens one of them a fine big adult male.

After getting up my skins we started to break up camp, packing everything possible for an early start tomorrow.

Toward evening the wind commenced to blow but I set my traps as usual. While I was setting my traps Aunt May found a pair of Brewers Sparrows which acted "nasty" and sat down to watch them. After a 10 minute wait she discovered the nest which contained three fresh eggs and she left it until tomorrow for more.

May 25th 1922

The wind was blowing terrificly this morning when I arose at sunrise and I thought the frail shack would collapse at any moment.

My traps held a very light catch - two *Perognathus l. bangsi*, one *Omychomys* and one *Dipodomys m. merriami*.

Considerable difficulty was encountered in getting the Ford packed as the wind would dislodge the load before the cover canvas could be thrown over & lashed down. After several hours of struggle against the wind everything was successfully loaded and we left about 1:30 p.m. bound for Shoshone, Inyo Co., the next collecting station.

The route lay south and gradually uphill for several miles, yet still in the Greenwater flat region with the luxuriant growth of Bunch grass, wild flowers and thorny brush, as soon as the summit was reached and the road started downhill I was surprised to find the association nothing but an abundant cover of creosote - with no mixture of flowers or other shrubs.

The place did not look very good for small mammals and still worse for birds. Indeed, the farther along I drove the more did I realize that the Greenwater region stood alone, as an isolated associative island - tho the vegetation still placed it in Lower Sonoran.

The farther down towards Shoshone I went, the more desolate and desert like became the country and as the last downhill slope was reached Desert Holly began to appear as the most predominant growth.

I reached Shoshone about 3:30 and was not favorably struck with the trapping possibilities. About a half mile north of the place I saw a tule marsh of about  $2\frac{1}{2}$  acres but a great herd of cattle were tramping thru it, and from former experience, I held but little hope of catching microtus, tho I strung out my traps thru this marsh this evening.

While setting the traps, hundreds of mourning doves came in to water.

Camp was established near the small settlement of Shoshone under a cluster of Mesquites near the main road.

The town is a railroad station where the train takes water & the crew take their meals and is situated in a narrow valley amid a 20 acre patch of Screw bean Mesquite.

A fair sized spring of tepid borax water keeps the Mesquites alive but during the past 3 years a terrible plague of Red Spiders have almost killed this scanty

growths much to the perplexity of the owners as they keep many hogs which had found subsistence on the beans before the blight had restrained their growth.

Their hogs also appeared to be a prospective menace to the camp, tho I shall keep a handy supply of rocks about, so that at their first appearance I may discourage further visits from the swine by a bombarding them with stones.

I watched for bats this evening but none were seen.

May 26th 1922

My traps held a single *Reithrodontomys*, truly a very disappointing catch - tho no more than I had fortold last night. The day was a scorcher and both of us were unable to get about much owing to our rundown physical condition, which thru the heat seemed to amplify.

I watched for birds in the nearby Mesquites during the day but was surprised by the lack of numbers. I shot a Western Kingbird and a Tolmiei Warbler - the latter was so fat that I could not make a good specimen so was not saved.

I went up to the tule marsh very early this afternoon and gave the place a thorough inspection. The trampling of the cattle had entirely obliterated any *microtus* runways that might have been there but by the closest scouting I was unable to detect any signs such as droppings or cut grasses which would indicate their presence. However, I set all my traps again this evening.

While I was so engaged three cinnamon teal flew in looking for a cool wet place to feed.

A half dozen Barn Swallows were searching about in the evening breeze, catching a few flies over the marshes and again the hundreds of doves were seen, coming in from all directions for the evening drink. Apparently the doves drank but once a day as I saw none when picking up the traps at sunrise.

A Prairie Falcon was seen catch a dove while the dove was going at full speed. Certainly a great display of aeronautics!

May 27th 1922

My traps held two *Reithrodontomys*, surely no *microtus* can be living here as I had 83 traps out last night.

After breakfast I took my gun and went hunting. Very few birds were seen. I collected a ♂ cowbird from a flock of four and a single Western Warbling Vireo was

taken near the spring. Near camp a ♂ Western Tanager was collected.

Many years ago some enterprising fellow had tried to farm the small patch of land below the spring but had failed, owing to the alkalic being drawn by irrigation up this field. I noticed a little fresh gopher work so I set the gopher traps in the evening and strung out my mouse traps near the spring and along the banks of the stream then thru small clumps of tules.

May 28th 1922

My mouse traps held three *Peromyscus e. eremicus* which were caught in the tules near the big spring. No signs of *Microtus* were to be found. The gopher traps held two specimens and I found several of the other sets plugged up, so reset the whole bunch.

A terrific hot wind sprang up about 10 o'clock making life miserable all day long.

It was blowing so hard at sundown that no traps were set.

May 29th 1922

The wind was still blowing violently and tho the night had been reasonably cool, it grew warm again as soon as the sun peeped up.

My gopher traps held three specimens and I reset the traps which had caught animals during the night.

I managed to build a wind break in which I put up the ~~box~~ three gophers and afterwardly I built a box to hold the Ibis from Furnace Creek.

On looking at my gopher traps this evening I found three more gophers had been caught.

I set my traps thru a small wet marsh near the clay mines west of camp tho on carefully searching thru the reeds I was unable to find any signs which would indicate animal activity of any sort.

May 30th 1922

My mouse traps were empty & so were my gopher traps.

An old miner told me of about a dozen short tunnels in a mountain side nearby so I looked them over for bats but found no inhabited places.

A lone *Antrozorus* was flying about the Mesquites about noon hotly pursued by a pair of Western Kingbirds and 3 or four English Sparrows. I reacted in catching the bat as it hung itself up to the lower limb of a tree nearby.

The wind died down to a dead calm about 1 p.m. and the thermometer which was above the hundred degree mark went up to one hundred and eight. I felt this heat as bad as the 118 degree day in Death Valley!



About sundown Aunt May & I drove up to the big tule marsh where I set my traps in hopes of catching at least one microtus tho my hopes were nil.

While setting the traps Aunt May saw a Virginia Rail & heard several Yellow Throats thru the reeds.

May 31st 1922

My traps held five Reithrotontomys but none of the desired microtus. I firmly believe that Meadow Mice are non-existent in this region now.

The day was fearfully hot and with so little to occupy the time it proved very irksome.

I learned of a bathing pool near the spring and spent a refreshing hour in its tepid water.

I would leave this place immediately but chose to have at least a few nights trapping about the desert washes so strung out the traps up a wash west of camp this evening.

June 1st 1922

My traps held a fair catch two *Dipodomys m. merriami*, seven *Perognathus formosus* and one *Perognathus bangsi*. The red ants were very bad despite my early arriving and several of the specimens were ruined by the insects depredations.

Aunt May went hunting this morning and killed every bird she saw which included three linnets, a western warbling Vireo and a Western Wood Peewee. Not much for the three hours spent roaming about in the hot sun. Later a lone ♀ Yellow Throat was killed as it was hopping about the Mesquites near camp.

Traps were again set up the wash west of camp and the line was run thru a rocky outcropping which appeared to be well inhabited by wood rats.

Just as Aunt May was getting into her sleeping bag this evening I heard a scream and running over to find out what the trouble was found a four inch scorpion crawling on her bed.

June 2nd 1922

My traps held three *Dipodomys m. merriami*, three *Neotoma i. desertorum* and three *Perognathus formosus* while the gopher traps held a single specimen. I picked them all up as I do not wish to exterminate the small colony of gophers here.

The day was extremely warm, making life miserable in camp.

While I was down to the store this afternoon I saw a pair of Vermillion Flycatchers. Their nest was situated in a screw bean Mesquite growing in the boarding house yard.

I was told by Mr. Brown, the owner of the place, that these "red birds" had never been there before and that his family greatly cherished this pair.

I went up near the large tule swamp this evening to set my traps in a promising looking wash. While I was busy with the traps Aunt May tried to collect a Virginia Rail which had been heard in the tules on the last visit. She heard a rail or two but didn't catch sight of them.

June 3rd 1922

My traps held one *Peromyscus s. eremicus*, one *Neotoma i. desertorum*, one *Onychomys*, one *Dipodomys m. merriami* and two *Perognathus formosus*.

While I was picking up my traps Aunt May watched a small slough in the tule patch & was successful in shooting a nice Virginia Rail at close range.

We started to pack up after I had finished my skins and no traps were set this evening as I will not have time to prepare specimens tomorrow.

June 4th 1922

Getting away at 1 p.m. I backtracked towards Greenwater about 10 miles and as I passed along the arid Creosote covered desert three dead cows were seen with a buzzard perched on each reeking carcass, waiting for the meat to properly ripen so they could have a banquet. The cattlemen waited too long before taking their stock out of the Greenwater region, losing several head from thirst.

The country had changed vastly during the past ten days, as all the annual growth had been dried up and crumbled by the rays of the torrid sun.

Near the summit, where the road started down towards the Amargosa desert, numbers of Ammerpurnophilus were seen dart across the road as the Ford coasted noiselessly down to long declivity.

The lowest part of the Amargosa desert lay on the southernmost end and it was here that the road entered its vast expanse.

This arid condition prevailed for a distance of about 10 miles or until Kelley's well was reached.

Here the underground channel of the Amargosa River was marked by a scattered growth of Screwbean Mesquites which appeared in almost single file towards the north west as far as the eye could see.

This whole desert seems to be one huge plain, gently sloping up towards the north, and as the elevation rose the association changed.

Near Kelley's well the first fair cover of low thorny desert brush was seen and oddly enough no creosote appeared.

It was yet very early in the afternoon, probably 3:30 p.m. and after a general survey of the immediate vicinity, I decided not to spend the night here but go on to the next watering place, Franklin Well.

This place was about six miles farther north and the only marks of human hand were the Auto Club sign post and a new steel windmill, which pumped water out onto the ground in a sort of natural depression which seemed as a water trough for a few cattle.

The water was nice and cold with a good flavor tho there was a crust of white saltlike substance on the end of the pipe where the water was pumped from the steel cased well, evaporated when just dripping out. Little did I realize what effect this was going to have on me when I drank freely of the refreshing, cool water.

I set my traps just east of the road and all of them within the boundary of California.

There was a fairly heavy growth of low thorny brush growing in this region with a very very few Creosotes scattered about, only 4 or 5 of them were seen in the whole trap line.

The soil was all more or less saturated with alkali salts and in one strip near a low rising area which looked like a small mesa I found volcanic ash. I sank into it over my shoe tops while the powdery dust almost choked me tho it was only agitated by my heavy shoes. Imagine what it could be in one of those heavy winds! Whew!

The place had its customary quota of birds in single pairs, lots. A vociferous pair of Western Kingbirds claimed the windmill and were slowly building their nest in a Mesquite close by the mill proved an admirable vantage point for them and they were only too willing to cease nest building put to flight,

Any raven or other bird that chanced to come in their sight altho the ravens were unaware of trespassing within the Kingbirds domain.

A pair of Bullock Orioles seemed to be on friendly terms coming and going at will without interference but this poor old pair of *Phainopepla* suffered a vicious attack every time they were either seen or heard within a radius of about two hundred yards of the mill.

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June 5th 1922

My traps held two *Perognathus l. bangsi*, three *Dipodomys deserti* and two *Dipodomys m. merriami*.

While I was putting up the few skins Aunt May searched about for nests but found nothing, a desert quail or two were seen thru the Mesquites as she roamed about. Returning to camp she conceived the idea of helping the Kingbirds furnish their new home & donated several fluffy chunks of cotton. The Kingbirds lost no time in taking advantage of the opportunity but their industrious mood was short lived and after the second trip to the nest, went off in pursuit of a raven who flew past a hundred yards or so away. How like humans are the birds, a new toy, a novelty, even something worthwhile, cast aside for frivolous pleasure and past time. The Kingbirds chased after the raven and the orioles took off their cotton!

Packing up I left Franklin Well about 9 a.m. traveling north towards Beatty, Nye Co. Nevada, the next collecting station.

After a few miles of travel the thorny brush was all replaced by Creosote and in a short time there was nothing but Creosote with an occasional colony of *Dipodomys deserti*, their open burrows standing agape open to the wandering sidewinders.

The only extraordinary feature of the landscape I noticed was a lone huge sand dune standing two or three miles to the eastward of the road. It was only one large hill rising about two hundred feet above the level of the plain and the ridges looked sharp along its sides where the wind kept rolling the sand. I was certainly glad that the road did not go closer to this nude hill as roads near sand dunes always mean hard going! I pondered long after seeing this hill just what had caused it & why it should remain intact, but could figure no sound solution to either question.

As the road approached the mountains it became decidedly rough tho yet not in any way comparable to the tortu~~r~~ous trails traveled in Death Valley.

Near Carara the road took up on the old Las Vegas Railroad grade. The rails and ties have long ago been removed. This was fair going but only a single track affair, however, travelers are very few in this desolate country and I met no one in the many miles I used this road.

I arrived at Beatty about 1 pm and such a place - about a hundred old shacks were huddled together on a couple of wide streets and reading the dim signs on a dozen old store fronts I found most of them had been "grog shops" where hard liquor flowed freely in the good old days.

A home restaurant was located and I absorbed a bit of nutriment but the most prominent feature of the meal was the price payed (sic). This seems to be one custom that has kept pace with the times!

Beatty at one time had a fair population but now is reduced to 6 or 8 families and a haven for lazy prospectors. The town is situated on the Amargoso River channel where the water rises to the surface in a narrowing gorge between the ends of two very old, erosion worn mountain ranges. The whole country was void of trees, tho a few willows grew in a short row where they had been planted years ago.

I looked the place over for trapping grounds but saw nothing that looked promising about the town so decided to go on.

However, as I drove northwest I discovered a small spring and an old deserted cabin about a mile north of Beatty.

The whole surrounding country was fairly well clothed in the characteristic desert brush - Creosote and about half a dozen species of thorny bush tho there was but little indication of annual growth. This fair possibilities for trapping and already I had noticed several fresh gopher holes about the small garden lot near the springs, so was encouraged enough to stop over a few days.

Aunt May became interested while searching about the half dozen trees which surrounded the premises as each tree contained an occupied nest.

She located a Mockingbird nest in a scrub willow tree, a shrikes nest in a small mulberry, a Phainopepla's in a Mesquite, a Western Kingbird's on a horizontal limb of a Cottonwood and a Bullocks Oriole's and another Kingbird occupied a Cottonwood. All these she had rounded up in about half an hour.

Camp was established in the cabin and proved quite comfortable, as an old gasoline stove was put into commission, after a thorough overhauling, and cooking could now be done indoors.

I strung out my traps south of camp this evening thru sandy, brushy, alluvial ground.

June 6th 1922

My traps held a fair catch, seven *Dipodomys (perodicus)* two *Dipodomys m. merriami* and two *Dipodomys deserti*.

I put in the best part of the morning helping Aunt May collect her nests.

The *Phainopeplas* seemed willing to stay with their nest after the eggs were taken, so I left it in hopes they would lay a second set in the old nest.

The Kingbird near camp in the Cottonwood proved very amusing for the finale would return to the nest site after I had taken the nest away, scolding soundly, and on the appearance of her sympathetic mate, would chase him away with a garrolous rebuke, as though he were to blame.

The poor Orioles who had had the nest in the same tree suffered also, as even tho they lost their nest too, they were not allowed to come within the sight of the mad Kingbird, who now claimed ownership of that tree, so I didn't think the Orioles grieved much over their loss, even tho the eggs were very heavily incubated.

The ♀ Phainopepla sat on her empty nest intermittently all day long, unwilling to give it up.

I found to my despair that the Ford had suffered greatly from the dry hot days and rough roads, as the back spring was broken and the front wheels were almost ready to collapse.

Traps were again set thru the brushy area this evening.

June 7th 1922

During the night a mouse was heard running about the house, so I set a trap which needed repairing but was good enough for such an emergency. It proved its worth, as a *Peromyscus c. stephensi* was captured. My line held a light catch, one *omychomys* and 4 *Dipodomys (perodius)*.

I spent the day getting my notes up.

The Phainopepla still cling to their empty nest, and the Kingbirds were almost as garrolous as they were yesterday, but the most remarkable thing was that the Orioles have started another nest within 10 ft of where their last nest hung. It doesn't take birds long to settle down again, this being due probably to the many natural accidents which deprive them of their nests, such as limbs breaking, wind or snakes.

I set my traps thru the same general type of ground as I used last night but saw some Perognathus signs while setting.

June 8th 1922

My traps held a fair catch and true to my observations two *Perognathus l. bangsi* were taken. Other things included were two *omychomys*, one *Dipodomys m. merriami* and 3 *Dipodomys*.

The Kingbirds today showed revived interest in nest building and had chosen a site in a small plum tree nearby. The orioles were extremely active so much so that they chased off the Phainopeplas who had deserted the nest but still hung about the tree and carried away

about half the Phainopepla's old nest, to Aunt May's dispair! Of course this ruined the nest either for collecting or the hopes of the birds again occupying it. But wait, Mrs. Oriole you are going to pay dear for this breach of neutrality as your past set was too far incubated to save.

Traps were again set thru the sandy flats.

June 9 1922

My traps held a very poor catch as a band of roving cattle followed up the line routing it almost completely. The catch consisted of three specimens - one each of Perognathus l. bangsi, Dipodomys & Dipodomys m. merriami.

I set the gopher traps in the small fenced garden plot and upon inspecting them this afternoon found three gophers captured.

Aunt May had put a lot of ravelings from some new trap markers she had torn for me and the Kingbirds lost no time gathering up the soft threads for their new nest. Meanwhile the Orioles had seen the Kingbirds glean the threads from the bushes and cast covetous eyes that way, but did not dare intrude. However, when the Kingbirds' incompleated nest was left unguarded, as Kingbirds are apt to do, the Orioles availed themselves of the golden opportunity and made exceptional speed in the construction of their own nest, with purloined material!

In watching such operations I began to firmly believe that birds, at times, have very acute reasoning powers.

I again set the mousetraps thru the sandy river bottom.

While setting the traps a dove flushed from her nest on the ground. The nest was sheltered by a low scrubby bush and contained two heavily incubated eggs.

June 10th 1922

My traps held a good catch this morning one Dipodomys deserti, two Dipodomys m. merriami, four Dipodomys and two Perognathus l. bangsi. The gopher traps held but a single specimen.

Aunt May saw a pair of Cowbirds and was successful in collecting the female which had an unusually large beak,

Traps were again set in the sandy wash country.

June 11th 1922

The traps held an abundant catch this morning and I have a good big day's work ahead.

The catch consisted of 3 *Perognathus l. bangsi* - one *Perognathus formosus*, 2 *Dipodomys deserti*, four *Dipodomys m. merriami* and five *Dipodomys*, while the gopher traps held four specimens.

I again set the traps thru the bushy bottomland this evening.

June 12th 1922

Another large catch was taken from the traps this morning - three *Perognathus l. bangsi*, six *Dipodomys*, two *Dipodomys m. merriami* and two *Omychomys*. The gopher traps were empty.

The day was a scorcher and I was indeed glad that the shelter of a shack was available.

The Kingbirds and Orioles seem to be the only pairs left of the birds robbed and have about completed their nests. This evening Aunt May located a Mockingbird's nest a few rods from the house and it held 4 heavily incubated eggs. Undoubtedly this nest belongs to a Mocker who continually sings from the peak of the roof and is a joy to all. I counted seven distinct bird's call that were plainly identifiable.

Traps were again set in the bottomland this evening.

June 13th 1922

My traps did not do so well last night catching three *Dipodomys*, one *Dipodomys m. merriami*, one *omychomys* and two *Perognathus l. bangsi*. The gopher traps held four specimens.

Today was a day of whirlwinds and several good-sized twisters swirled past, stirring up great clouds of dust and sending stray papers high into the air.

Aunt May went out on the hills north of camp and discovered another dove's nest situated on the ground, beneath a small bush.

The Mockers hatched today and the male hushed his lovely singing, diverting his attention from music to the feeding of four hungry nestlings.

June 14th 1922

Apparently the change of association was not much of a barrier to the *Dipodomys* and *omychomys* as ten of the former and one of the latter were taken to my astonishment! Other things taken were one *Peromyscus c. stephensi* and seven *Perognathus formosus*.

I had a good number of skins to work on despite the heat which was 92 at 1 p.m.



The traps were again set up thru the rocky slope this evening.

The brush on the hills doesn't seem to differ from the low land except in the lack of abundance, but the ground is entirely covered with broken rocks. This feature, however, would seem to eliminate certain species and it was indeed a surprise to me that the *Dipodomys* should be so abundant on the slopes.

Aunt May went with me this evening to tie strings and as we were proceeding up the slope she spied a small Desert Sparrow's nest tucked in a thorny bush. It contained four almost dried up eggs and was probably the result of a tragedy in the sparrows' family.

June 15th 1922

My traps held a fair catch this morning - one *Reithrodontomys*, one *Onychomys*, one *Peromyscus c. stephensi*, two *Dipodomys* and nine *Perognathus formosus*.

The day was unusually hot and the skinning dragged terribly. I did not set traps this evening as I wish to proof read & pack all the specimens tomorrow preparing to moving Saturday.

June 16th 1922

Before proofreading the specimens we collected the nests of the two pairs of birds who had again nested after the *Phainopepla* robbed on the 6th.

We then proofread packed every possible specimen which I shipped in two boxes this afternoon.

After getting the specimens safely shipped and a telegram of directions in for transmittal I drove over to Rhyalite, one of the most famous ghost cities of the West - 5 miles distance from Beatty.

The place had been abandoned about 10 years ago, the inhabitants taking only their personal belongings and leaving all to rust.

Several four story concrete buildings were there and a R.R. depot that any small city could be proud of.

As I was peering around the ruins I chanced to look into the windows of what was once an undertaking establishment and scattered about over the floor were several lidless coffins - a gruesome sight.

The mountains all about the place were honeycombed with tunnels where men had prospected for gold.

I arrived in camp about sundown and commenced to pack up.

June 17th 1922

An early start was made with Lida Emeraldal Co. Nevada as the goal and our next collecting station.

About five miles north of Beatty small farms began to appear, each situated near a spring & surrounded by green fields & meadowy pastures.

When the road was bordered by small trees, Aunt May spied a Nevada Redwing's nest in a willow tree. I climbed it and found 3 small young ones. Meanwhile a Phainopepla on her nest in the next tree, could stand the excitement no longer so flew off and of course disclosed the hiding place of her treasures. This nest contained two eggs and was taken.

This region is known as Oasis Valley and is the source of the underground Amargosa River which reaches ~~xxx~~ its end at Eagle Borax in Death Valley.

Springdale was the last of the springs and a group of small shacks were clustered about a store. This place, no doubt, was kept alive by the small farmers and the few miners who worked nearby.

A few miles north of Springdale I saw a Citellus scramble across the road, so stopped the Ford and tried to shoot a few. This method proved unfruitful and after half an hour of trying I started on keeping the gun loaded. In this way two specimens were taken.

As I was driving along slowly with the mufflers closed I saw a weasel dash across the road a hundred yards ahead and on drawing up to the spot I saw it skulking behind a small bush about forty feet from the road. I shot at it with the 410 loaded with dust and had it killed or mortally wounded, so I thought as the beast rolled over, feet up, and was kicking. In my haste to secure the animal I foolishly left the gun behind and on nearing my quarry, it sprang up and started away. I thought of returning the few steps for the gun, but I knew if I lost sight of the weasel it would be gone, so I decided as long as it was so badly wounded that I could catch it, and off I ran at full speed. The chase lasted about two hundred yards, with the weasel getting faster every jump, finally it slipped from sight in a dense brush patch and was seen no more.

Meanwhile, Aunt May, seeing the turn of events tried to catch up with me bringing the gun but was unable to do so.

A little farther along, a lone windmill was pumping water out into a ditch for the cattle and lots of squirrels were seen darting into their holes nearby.

This was too much and so I got out with the gun, shooting one immature. But it took Aunt May to conceive the real idea when she suggested that I dig out the two water buckets from the load & drown squirrels out, like the Indians did near Benton last year.

The first hole into which four buckets full of muddy water was poured yielded a fine adult male squirrel but holes were flooded for an hour thereafter and not another animal was elicited. This was due to the fact that in only the first hole tackled had the squirrel been seen to disappear but unless one does, its a big chance and lots of hard work trying to fill all the holes with water.

This place seemed a mecca for doves and I do not believe that I overestimated when I say fully five hundred of these birds were flushed when I drove up. The air fairly shrieked with their rising!

This region would make a fine collecting station but would be impossible owing to the fact that sanitary water was not obtainable.

Driving on I was soon running thru one of those vast brush covered expanses which are almost level and on which one can see so many many miles ahead.

This road looked like a white ribbon as it threaded in and out thru the brush and finally vanished in the far distance. It seemed never ending, tho the surface was fair and the Ford rolled along at a steady gait, I grew very tired, and the monotony of this landscape in the glare of the bright sun, made the trip extremely irksome.

This wide plain looked exceptionally fine for trapping, but again - no water. However, in the near future it will be possible to work this valley, as a "Cow outfit" is now drilling a well, in the middle of the plain and I heard that water had been reached.

Three of these long brush covered plains were crossed before reaching Goldfield, and as I topped the ridge, just before descending the last half mile to the town, the fragrant aroma of sage was detected. It brought back visions of cool mountain meadows, running streams and snow tempered breezes to me, who has spent the past months, like a chuckawalla baking in the torrid sun. And I longed for the mountains with their banks of snow and crisp air. But this year is "Desert Year" and my longings are in vain.

Goldfield, once a booming town with plenty of business and lots of money, seemed in the last struggle for existence. The once fabulously rich gold mines are now worked out and closed down, probably forever. One by one the merchants and shopkeepers have become discouraged and left, with the result of many vacant

buildings. The streets seemed deserted and so little travel prevailed that a burro which was standing in the shade of a building, in the middle of the street, had become so used to spending his leisure hours in that spot, that he refused to move, even tho I ran right at him and blew the horn.

A few listless inhabitants were perched in the shade along the main street and gazed searchingly as I drove through.

The greatest surprise, however, was found in the local cafe where an exceptionally fine luncheon was served at an extremely nominal charge.

After the short rest during lunch hour I turned the Ford again on the road and headed for Lida - twenty-nine miles west.

Backtracking the road on which I came in six miles, the decided route led up thru a narrow gorge, finally coming out on a plain above. This again, was another of those brush covered expanses which seem to go on and on. However, Mount Nagrude loomed to the westward and already the pinyon pines were plainly visible, and promised a pleasant, cool sojourn neath their sheltering branches.

About the middle of the plain old "Hank Ford" began to pop and sputter, finally going dead! This was pleasant and so I had to get out and go trouble shooting. This took considerable time, tho I finally located the trouble in a faulty timer wire. After properly insulating it with tape, the old Ford went along as willing as ever.

On this plain Citellus were more abundant than at any place I had seen them, and the nearer Lida I got, the thicker they became.

Doves were common all along the route, and this valley had its fair quota. A lone Horned Lark was seen and his trill, as he flushed, sent a pitiful thrill thru me, as he seemed lost in the vast expanse of the bleak, wind swept mesa.

Ever since leaving Goldfield the road had been on a gentle incline, rising always towards the summit above Lida, and when the mouth of the canyon, up which the route lay, was reached, the sage belt was found. Many Citellus scurried across the road, as the machine thrummed its way up the easy grade. The hills here on either side of the road were honey combed with mine tunnels, for Lida had been a famous silver camp in days gone by.

As the road passed thru a narrow gorge, where a small willow bordered stream seeped its way out of

sight, Lida came in view. Quaint old Lida, who had been known to the Spaniards a hundred years ago, and where the present residents still pointed out their old old diggins.

The place was really picturesque with its wide street, a half dozen old shambling buildings and the town well whose creaking oilless pulley, creaked with exactly the same sonorous tone that hundreds of other town wells do.

Several large Locust trees were in a burst of flowers, perfuming the whole country side and hidden from view and escaping warm rays of the afternoon sun, a lonely Mockingbird was serenading the village. A brilliant Bullock Oriole was seen hanging upside down on a large cluster of white locust blossoms, searching each blossom for insects, with which to feed his nestlings. A Mountain Bluebird perched on the cornice of an old saloon building, was probably the sole inhabitant of that infamous wine shop now.

After getting the accumulated mail, I asked numerous questions regarding good camp ~~sites~~ sites at the highest possible elevation. Mr. Collins, the proprietor of the small store and he directed me to Indian Spring, one mile west of the summit and for that locality I set forth.

The road west from Lida became steeper as it approached the summit and as a last farewell, a short steep pitch was encountered.

Zonally, Lida was situated near the lower edge of upper Sonoran, as a few hundred yards west, juniper and Pinyon trees began to appear while the ground all around was well covered with sage brush.

As altitude was gained the junipers were replaced by a heavy stand of Pinyon, which, near the summit, was growing in as dense a forest as I had ever seen this species of pine grow.

Right on the summit a Geological Bench mark showed an altitude of 7409 ft.

Late Spring flowers were abundant and indeed a welcome sight to see. There were pale blue Larkspurs, several spears of daisies and the most beautiful bright yellow Mariposa lilies grown everywhere.

Birds too, were more numerous as many noisy Pinyon Jays were seen searching thru the treetops near the road, and several Woodhouse Jays flying past, while the sage brush seemed well populated with Brewers' Sparrows, some of which were perched on the tip top of a sage brush singing their high pitched spring songs.

As the boiling Ford struggled over the summit, a glorious scene lay to the westward. The whole white

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Mountain range was visible, each peak situated with the remnants of last winter's snow, while White Mountain Peak, with its white snow capped mantle, stood like a sentinel above the range, lending grandeur to the scene. The rugged, snow capped peaks of the High Sierra, farther to the west, rose above the Whites. Large banks of heavy clouds floated above them all, and were tinged all shades of reds and golds by the setting sun: Surely a sight to rest the weary and give inspiration to even a Rat catcher.

The mile from the summit to Indian Springs was made by coasting, and with my attention centered on finding a favorable place to set my traps before it became too dark, the distance slipped swiftly by.

A small well built tent house in a fair state of repair, was situated a short distance from the spring, and as it was deserted, offered shelter, tho upon inspection, considerable renovating was necessary to make the place sanitary and inhabitable.

However, a small stove inside the place was fired up and a hasty meal prepared.

While the tea water was heating, Aunt May helped me string out my traps thru the sage brush nearby. While so engaged a Brewer Sparrow was flushed from her nest in a low scrubby sage brush. The eggs were badly incubated but were taken anyway, as old man "Superstition" always seems to creep in if the first set found in any locality is not collected.

The night was gloriously cool! How exhellerating (sic) the crisp air seemed after the parboiling of the past two months!

June 18th 1922

My traps held but five specimens, four of which were the cherished *Perognathus m. magruderensis* and the other a *Peromyscus m. sonoriensis*. Not much of a catch, but at least it assured me of securing a fair series of the topotype pocket mice.

Needless to say the greater part of the morning was spent scrubbing up the cabin and getting camp established.

After the camp work was done and the spring cleaned out, I sat down to skin while Aunt May went nest hunting. She returned after a good tramp with another nest & four eggs of the Brewer Sparrow. These were in a much better state of incubation. She reported an abundance of Brewer Sparrows and Green Tailed Towhees while a pair of Spotted Towhees occupied a small rose thicket above camp. This pair of birds, she thought, had a nest and refrained from shooting them.

I experienced considerable difficulty in preparing the *Citellus* skins, the animals being so extremely fat that it was necessary to scrape every part of the skin

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& then immerse them in gasoline. This method takes lots of time and I found the afternoon slipping away fast without much being accomplished, for I had yet to go to Lida for supplies and return in time to set my traps.

I set my traps again up on the sloping base of Mount Magruder; and while so engaged a Poorwill was heard offering his plaintive "Poorwill - Poorwill" from the Pinyon Pines up the slope nearby.

June 19th 1922

My traps held a splendid catch and to my extreme joy and surprise a shrew was taken, far up the hillside amid the dry sage brush. On skinning this animal I found it to contain two small embryos, the first time I had ever collected a pregnant shrew. Another surprise was the taking of an immature *Dipodomys* (5 toed species). This latitude 7700 ft. seemed unusually high for this animal and was not at all expected, so the mammal collecting promises to be anything but stale here!

Other animals collected were four *Peromyscus sonoriensis* and six *Perognathus m. magruderensis*.

Yesterday Aunt May had heard the "chickering" of chipmunks thru the bushes so I left the traps out hoping to catch a specimen or so.

During the day two chipmunks were taken and proved to be *Eutamias pictus*.

While I was busy with my skins Aunt May went nest hunting.

She found a Woodhouse Jay's nest situated about 8 ft up in a dense Pinyon Pine, the nest contained one well feathered young one and two infertile eggs. She collected the nest, young one, eggs and two parent birds. A complete representation in a single family!

On her way back she searched about thru the grove of pines where the poorwill had been heard last evening and Lo! up flushed the bird but instead of eggs she found two downy young, whose eyes were as yet not opened. Nearby was the remnants of a once creamy white egg, a prize it would have been to any oologist!

The old poorwill fluttered about doing all kinds of antics peculiar to ground nesting birds, including the famous broken wing dodge and all the time uttering a peculiar call which sounded considerably like a Least Tern, pathetic it struck me when I saw the nest later in the day!

I had my doubts whether I could successfully make skins of the tiny babies, so they were left for further development.

The traps were rebaited at sundown and held a Green-tailed Towhee.

June 20th 1922

My traps held six *Perognathus m. magruderensis* and three *Peromyscus m. sonoriensis*, not so bad for a second night over the same ground!

Aunt May went hunting nests on the mountain side today finding a Brewer Sparrow's with a single egg and saw two other birds drying straw. She watched them a long time but they refused to carry on the work with a strange being about, watching the operations.

After lunch I cranked up the Ford and drove down to Pigeon Spring to look the country over. The place was about five miles west of camp and had a small flow of water risen from spring in the arroyo bed.

The long sloping mesas on the side of the arroyo were ~~xxx~~ covered with Pinyon, Juniper and sage while the alluvial soil in the wash was densely covered with a heavy stand of sage. This locality is listed as being the type locality of Lagunas cretatus but I could find no indications of them nor did I get very enthusiastic over the prospects of trapping there.

A stamp mill is located a few hundred yards north of the spring and was built during the Goldfield boom. I was much interested in looking it over as some of the finest machinery obtainable was being eaten up by rust. Someone spent lots of money getting no returns!

About two miles farther down the wash the Old Palmetto stamp mill was situated. This place is an historic relic dating back to the early days and stories of fabulous wealth are told about the place.

The old buildings are of masonry and a few very old fashioned retorting ovens are of brick, which was hauled around Cape Horn.

Most of the machinery has been removed but an old steam engine which was probably too old for further service, when the salvage parties ransacked the place, is indeed a piece of antiquity.

I was rather favorably impressed with the trapping possibilities here as the influence of the lower Sonoran zone was plainly visible thru the wash bottom and much animal sign was present.

*Citellus* were darting all about and their piping high toned "cheep" was heard from almost every bush. This place was on the lower edge of the Pinyon - Juniper belt, in fact, none of this growth was to be found within a quarter of a mile distance and I do not believe this feature to be unnatural either - that is, cut away by the early settlers, as there were no more trees of either species to the westward. A few scrubby yuccas were growing about, hence the name Palmetto, as that was the name this tree was originally known by.



Where a tin was nailed as a roof over a box on the north outside wall of the mill building, Aunt May found a House Finch's nest containing five heavily incubated eggs and inside the mill a Say Phoebe was seen cleaning away pieces from an old nest situated on a rafter - obviously the bird was constructing her nest in a more secure location at the expense of another bird!

I picked up the traps this evening and reset them thru the wild iris & Rosy thickets about the spring. No chipmunks had been taken during the day. Woodticks seem very abundant this season and after every excursion thru the brush, it is necessary to change clothing.

June 21st 1922

My hopes, in sitting near the spring last night, was that either Lagunus or shrews might be found there but such good fortune did not befall me for on picking up the traps I found that the *Perognathus m. magruderensis* were as abundant thru the damp thickets as they were on the dry sage covered slopes. Four of them were taken with five *Peromyscus m. sonoriensis* and a single *Reithrodontomys*.

I had not previously mentioned a small homestead south west of camp where several fine fields of luxuriant alfalfa grew. The water for this irrigation is taken from several small springs on the mountain side and piped to the fields. Several large rose thickets surround these springs and I hope to find my Lagunus there in the near future.

After getting up my skins Aunt May and I took our guns & hiked well up on the northwest slope of Mount Magruder.

I went high up on the slope almost to the summit of the first peak, so I could get a general view of the surrounding country.

These mountains are not of the rugged type, but of much older geological period than either the Whites or Sierras and are rounded by age. They sloped gradually from all directions and the Pinyon, Juniper and sage belt held to a general line of demarkation limited by the altitude. Mount Magruder seemed to be the only peak of the Palmetto range whose summit was higher than the Pinyons would grow, and resembling the Whites, had nothing but sage brush in place of the ordinary transition vegetation of conifers and oaks.

Several green spots on the slopes below marked the location of small springs.

All the people about tell me that sage hens live on the sage flats above the timber but I didn't have time to hunt them up nor did I see any sign, tho the place is exceptionably well suited for their inhabitation.

Aunt May, scouting about in the Pinyon forest found much of interest in the bird life. She located a Red-shafted Flicker's nest situated in a short stump and when I saw it, the yelling of the young sounded like a lot of rattle snakes buzzing while the chips outside the nest were classed as the refuse from a saw mill by Aunt May.

A chickadee's nest was found by her in another of these short stumps. It also contained young and a Cassin Purple Finch's nest was found situated in the upper branches of a Pinyon Pine containing three large young - these with the two parent birds were collected.

She also saw a Junco fly past and heard the alarm notes of a Western Robin which kept always about but out of sight. Black-throated Grey Warblers were not uncommon and were probably nesting.

Near the summit I saw a single White-throated Swift flying about.

This evening I set my traps thru the aluvial wash which was densely covered with a heavy growth of sage brush.

While tying the markers for me Aunt May chanced to spy a Jay's nest in a scrub Pinyon nearby and on examining it she hauled out three very small chipmunks whose eyes were just opening. They were immediately claimed as prospective pets.

June 22nd 1922

My traps held an enormous catch - 22 *Perognathus m. magruderensis*, two *Peromyscus m. sonoriensis* and one each of *Dipodomys* and *Reithrodontomys*.

Indeed there is nothing ahead of me today but a long session of concentrated work.

Aunt May went hunting but had no luck with nests. She collected two Ash-throated Flycatchers and a Green-tailed Towhee. On two visits during the day to the trap line which had been left out, she added four Chipmunks *Eutamias pictus* to the already large catch.

I put up the 29 skins by 3:30 and was thoroughly tired out so rested until time to rebait the line.

June 23rd 1922

My traps held a fine catch tho not nearly the number taken yesterday from the same setting. It contained four *Perognathus m. magruderensis* and five *Peromyscus m. sonoriensis*. The traps were again left out and watched every few hours by Aunt May. During the day three *Eutamias pictus* and three immature *Citellus* were collected.

I picked up my traps this evening resetting them on a bench north of camp about a quarter of a mile away and on the south slope of Palmetto Peak. The association here was slightly different from where I had been trapping as the Junipers were scattered thru the Pinyons and the sage was very short and stunted. The soil was extremely rocky and on careful examination I wasn't exactly cheerful about the prospects.

June 24th 1922.

As was expected my traps held a poor catch, three *Perognathus m. magruderensis*, two *Peromyscus m. sonoriensis* and a single *Eutamias pictus*.

After getting the skins up I blew all the eggs, breaking a set of Brewer Sparrows and the linnets.

I then drove down to Lida after supplies and mail. I was greatly surprised to receive letters mailed in Pasadena on June 8th & a card from D. stated that his departure from the Crown City had been as scheduled!

On getting back to camp Aunt May & I walked up the mountain side to her Chickadee's nest after the young but unfortunately they had flown & were not to be found. We chopped open the xxw flicker's nest but found the young were almost featherless and impossible to make skins of.

On the way to camp I picked up one of the baby Poor-wills. It took a long time for me to make up my mind to do it as their down was so tender that a touch of the hand rubbed it off.

The Poorwill had moved her young about 20 ft up the hillside from where they had been hatched. How she accomplished the feat was incomprehensible to me.

I strung out the traps while Aunt May tied markers, setting them around a large rose thicket and about the homesteader's garden plot. While setting the traps a Brewer Sparrow was flushed from her nest in a sage bush. It contained four heavily incubated eggs.

About 9 o'clock this evening the mother Poorwill came right to the cabin door making her peculiar ternlike call. She kept it up about half an hour and then I could stand it no longer so took the young one back. I couldn't have made a skin of it anyway as about half of its down had been rubbed off getting it to camp.

June 25th 1922

The catch held a surprise for me this morning for six *Dipodomys* were taken from the thickest part of the rose thickets where I hoped shrews & *Lagurus* would be found. My hopes were blasted, however, as neither of the

latter two were taken. Other things collected were three *Peromyscus m. sonoriensis*, two *Perognathus m. magruderensis* and a single *Reithrodontomys*.

Aunt May went out collecting after the camp work was finished, finding two sets of Brewer Sparrows and taking two specimens of Greentailed Towhees & a young Brewer Sparrow.

She had a great time getting the ticks out of her clothing upon her return, catching nearly 70 of the blood sucking insects. This feature makes collecting quite discouraging as the bites remain sore for many days and at times, quite painful.

I set the traps again over the same general locality as I had trapped in last evening.

June 26th 1922

My traps held seven more *Dipodomys*, eight *Perognathus m. magruderensis* and a single *Reithrodontomys*.

A Scott's Oriole was heard singing in the Pinyons around camp and Aunt May, after a half hours chase, was successful in collecting it and a spotted Towhee.

After getting up my skins I drove down to Lida after mail as I am beginning to be anxious about a shipment of traps that should have been here before now.

A notice was waiting me in the P.O. stating that the Express Co. held a collect package for me at their agent's office in Goldfield - someone had made a mess of the things, instead of mailing the package as I had instructed, it had been sent Express. This means a 70 mile trip to Goldfield. The reason some people cannot follow instructions or simply disregard them seems puzzling to me as I had taken pains to mention mail in my message as I knew what conditions prevail in the rural places where even telephones are lacking.

Heavy banks of cumulus filled the sky & were crowding in towards the higher peaks on all sides. The reverberation of thunder reminded me, thru the poignant thoughts I was having, that an impounding storm was about to precipitate.

I hastened towards camp but not without a thorough drenching and when getting to the last hill near camp, I found the road was so slippery that I could not get up, so covered up the Ford and dashed for the shack.

The rain kept up until well into the night.

June 27th 1922

Dawn broke with a heavily overcast sky with a promise of rain so the accumulated specimens on hand were checked over and all set in rotation ready for proofing.

About noon the threatening clouds seemed to clear away so guns and cameras were hastily collected & we tumbled into the Ford bent on seeing the southern side of Mt. Magruder.

This trip, however, was doomed to be of short duration for no sooner had the divide south of Lida been reached than heavy ominous clouds began to smother the sky and flashes of lightning with the reverberating peals of thunder were seen and heard.

Turning back we again had to make a run for cover & barely avoiding another drenching.

The rain continued well into the night and in consequence no traps were set.

June 28th 1922

The dawn broke with a wonderfully clear sky and undaunted by yesterday's failure to see the southern slope of Mount Magruder we started out about 8:30 a.m.

This time the route was changed and instead of going eastward via Lida, I turned to the west driving as far as Pigeon Springs thence south as far as Log Spring.

The route from Pigeon Spring to Log Spring, a distance of about two and a half miles, lay up a canyon which was very picturesque with its jutting rocky ledges set with a scattered growth of large Junipers and Pinyons.

The day was fresh and glorious, just cool enough to make one feel joyous and even the moulting Brewer Sparrows were bubbling with song happy to again see the sun after the past two rainy days.

Birds were few aside from the few flocks of Pinyon Jays and the ever present Brewer Sparrows thru the sage but one other bird was seen in the canyon and that was an old Red tailed Hawk who launched forth into the air with a shriek of surprise as I rounded a sharp curve coming upon him unawares as he perched on the top of a Pinyon near the road.

Near the head of the canyon a small Placer Mining Company had their camp and several men were at work constructing ditches, dams etc, so they can operate the claims next spring.

The road now turned southeast over a large rolling exposure of low scrubby sage brush. This place had the

appearance of being a favorable locality to search for Lagunus certatus resembling closely the high sage covered slopes in the White Mountains and having a profusion of the same sort of short meadow grass growing in the damper places.

Two Sage Thrushes were seen as I drove the several miles in crossing this high sage covered area.

Nearing the summit, many placer diggings were seen thru the swales where the 49ers had worked for gold and the hills all about were scarred with dumps where miners had searched for the Mother Lode, in vain.

It seemed inspiring to drive thru these old diggings in a self-propelled mechanism and think that the people who had toiled "tearing at the very roots of the earth" in the early days had probably ridden these same roads in prairie schooners drawn by oxen.

The ground seemed all torn up but I had still to see the real "diggings". This place was found after descending a steep road which followed down the bed of the canyon which was only as wide as the road. I am unable to say what would have occurred should I have met with a vehicle going in the opposite direction for the narrow road and steep sloping canyon walls on either side would have permitted no passing.

Where Tule Canyon broadened out a bit the digging commenced and it looked as if a thousand Badgers had been working in a small city lot.

Nature had been doing her best to heal up the hideous scars by filling them up with her cloudbursts and hiding them with a dense covering of brush. 70 years however have rolled their seasons past and yet the workings hardly commenced.

The vegetation in the upper part of the canyon, where the Junipers and Pinyons had chipped down had been devastated by fire, long years ago, and such a thorough cleaning had been given by the blaze that only the most hardy annuals had reinhabited the ground.

Birds were scarce. The flute like song of a Scott's Oriole was heard from the brush on the side hill and I tried to get within shooting distance but the bird was too wary. A single spotted Towhee was seen but it also was careful to keep out of range, choosing vantage points on the side hill where successful approach was impossible.

About half way down the canyon I picked up a miner on his way to Goldfield, having just completed the yearly assessment work on his claim nearby. He proved a most ludicrous fellow with his humorous tales of mining camps he made the rest of the trip very entertaining.

After a very steep short pull up out of the canyon the road led northeast thru a vast expanse of rather arid country.

Yuccas were growing in scattered formations on the rising slope tho not as thick or as large as the forests about Hesperia.

This feature accounted for the presence of the Scott's Orioles which were scattered singly through the Pinyons higher on the mountains. They having completed the nesting season were higher up where cooler weather prevailed and food was more abundant.

Near where the road turned north towards Lida a large Hawk was seen perched in a Yucca. Getting my gun I tried "direct approach" but could not get within range. The bird flushed and I discovered it to be a Swainson Hawk and that she had just been feeding two nestlings in their nest. The birds were of good size but still in the natal down so I left the family unmolested and shall return some later day to take some photos and collect the specimens.

The north wind had sprung up during the morning and dark clouds were rushing in so camp was again made for with a rush.

I had only had time to get the machine covered up when the deluge came and it rained hard for a couple of hours.

However, this district was not in the center of the downpour today and by evening the sky overhead was clear so the traps were set out.

I chose a spot near the alfalfa patches southwest of camp setting thru a stretch of ground which had a lot of rather coarse grass growing abundantly on it amid a scattering growth of roses. The line inched up thru the usual sage brush association on a side hill in a small gully.

I had nearly all my traps picked up this morning and was beginning to feel annoyed with the same kinds of animals in every night's catch, when chancing a glance ahead tho not with a thought of discovering anything unusual, my gaze fell on what appeared to be a Lagurus safe in a trap, not far away. I lost no time picking up the few traps and was delighted to find it was a Lagurus, and a perfect specimen too! And indeed added a new zest to the trapping.

The catch included four *Perognathus sonoriensis*, five *Dipodomys*, nine *Perognathus m. magruderensis* and the prize Lagurus.

The clouds came up about noon and rain commenced to fall in the middle of the afternoon keeping up a torrential downpour until after bedtime so no traps were set.

June 30th 1922

The day dawned beautiful with a cool refreshing breeze that had been filtered from its heat and dust by last night's storm. Fleecy clouds hung about the mountain tops giving a touch of rare beauty to the whole landscape.

With no accumulated skins in camp this was surely a day for a tramp so taking our guns we set out.

First of all a trip was made up to Aunt May's Poorwill and enroute a fine set of 4 Brewer Sparrows' eggs was found by her.

The Poorwills were found downhill this time from where they had been hatched and about forty feet from where I left them last.

This trip they were large enough for skins so after a fight between tender heart for the trusting youngsters and "old man" conscience who stood strong for the employer the latter won. But Aunt May had to do the collecting, somehow the pleading call of the old Poorwill and the birds paternal instinct with its keenness of search enabling it to locate the single youngster the night I brought it to the cabin, got the best of me and I could scarcely restrain a tear of regret as the gun popped when the parent was killed. Sometimes such vicious acts as this almost quench the spark of ambition that burns within me and I question whether the science for which I work is really justified after all. I am beginning to believe that a study of the living things in their native surroundings, happy and content, offers more on their world than their dried feathers or hide, pored over with calipers and microscope.

The young Poorwills were put in a box and kept alive so I could photograph them when the light was right. We then set out for some springs that were situated about two miles south of camp where we arrived after an uneventful journey.

A couple of old cabins stood in a small clearing. This place had been a pumping plant which added its small stream to meet the demands of Goldfield when the town was at its height.

Entering the cabin which had been the living quarters for the engineer, a linnnet flushed from her nest which was concealed in the canvas that lined the inside of the place. The nest held four addled eggs and one large young one.

A Say Phoebe had ~~xxxx~~ her nest on a shelf in a cupboard composed of boxes piled one on top of the other. Her nest contained one fresh egg.

Outside, a pair of Mountain Bluebirds were lurking about uttering their plaintive call note and flitting from post to post in an anxious manner.



The outside of this cabin was completely covered with composition roofing paper and a general search resulted in Aunt May locating a small round hole near the eave on the north side of the house. A slight tearing of the paper resulted in the finding of the Bluebird's nest which contained three incubated eggs and one fractured one.

The nest was a huge affair, constructed entirely of shredded bark. Evidently the birds had endeavored to fill up the large space, five inches deep and about two feet long, spending their whole spring season packing material!

Nothing much was to be seen here so we turned our steps towards camp.

Two more heavily incubated sets of Brewer Sparrows' eggs were taken near camp.

I spent the rest of the day writing up my notes. I was surprised to learn when Aunt May skinned her adult Poorwill that it was a male. This fact would point out that these birds share alike in the care of their offspring.

I set out the traps again this evening thru the same locality I had trapped last, trusting that more Lagunus might be taken.

July 1st 1922

My traps held seven *Perognathus m. magruderensis* and 5 *Peromyscus m. sonoriensis*. This catch was rather disappointing and indicates that Lagunus are rare in this locality at least. Commencing with this evening I am going to trap down the canyon setting each night at a lower elevation endeavoring to catch the different associations.

This place is so gradual in the decline towards Fish Lake Valley and the lines of different plant zones so well defined that it should be interesting to locate where the different animals find their limits both from the lower valley and the higher mountains.

I photographed the two young Poorwills this morning and beautiful creatures they were. Their peculiar side swaying and waddling caused several outbursts of mirthful laughter from me while the pictures were being made. Indeed it was very hard for me to realize that the two were doomed and I believe they would have had another chance for life had I had any way to procure food for them.

In the late afternoon Aunt May and I drove down the canyon to set the traps. I chose a place where nothing but large sage bushes were growing and in the bottom of the wide canyon, the rank growth of the sage brush indicated that the soil was highly fertile and well powdered.

This was the first change of association west of camp and was situated near the lower limit of the Pampas and where the forest seemed about half Pinyon and Juniper tho the trees were restricted to the hillsides.

July 2nd 1922

My traps held but little, two *Perognathus m. magruderensis*, four *Peromyscus m. sonoriensis* being the catch despite the fact that ninety traps are being used for this bit of faunal work.

The night trapping verified my former conclusions regarding the sage association and shall make another setting farther down this evening.

The line was set up a series of small chasms backing out of the main canyon to the north and directly across the valley from the Pigeon Stamp Mill.

Very little animal sign was noticed while putting out the traps but I am setting now by association rather than mammal signs - choosing the highest defined limit of certain growths.

This evening the sage was very low and scrubby mixed here and then with a sort of Buckwheat brush, while the soil was of very fine rocks.

The mesa at the heads of the small ravines seemed to have the same growth tho I was careful not to get back into the solid sage.

While engaged with the traps a Sage Thrasher was heard singing from the top of a nearby Juniper. The song was wonderfully rich and melodious tho monotonous after being heard a few times, as the same few bars were repeated over and over, true Thrasher fashion. While in character the song seemed reminder to the mockingbird, it lacked the variation which is so delightful with the polyglot's songster.

July 3rd 1922

My experiment in delinestation began to show definite results this morning when two *Perognathus l. bangsi* showed up in the line - one was taken well down the small draw and the other was caught on the mesa tho the association in both cases was alike. Other specimens collected were one *Peromyscus m. sonoriensis*, three *Perognathus m. magruderensis* and a peculiar *Eutamias* which seemed vastly out of place.

About noon heavy black clouds filled the sky & later rain began to fall making trap setting impossible this evening.

July 4th 1922

Put in the morning getting my notes in shape, blowing eggs and other odd jobs that needed attention.

In the afternoon I drove down to Lida after supplies and mail. The whole population of the village were in the midst of a celebration and the effects of home brew and moonshine was very evident.

This evening traps were set at the next step down the valley to the East Palmetto. This time the brush was of rather heavy stand and mostly of thorny character with thick round juicy leaves. Sage was scattered about thru the place but was not growing dense like it does higher up the valley.

As the Ford was quietly coasting down hill near Pigeon Stamp Mill a large badger ambled across the road in front of me. Quickly stopping I brought him to bay before he could find a hole and after some time finally killed him with stones.

July 5th 1922

The night's catch again showed the desert association coming in where one *Onychomys*, one *Perognathus l. bangsi* and seven *Dipodomys* of a different species than those taken higher up on the mountain, were collected.

The higher zones still had their influence on the mammalian life as two *Perognathus m. magruderensis* and two *Peromyscus m. sonoriensis* were taken in the line.

After picking up the traps I drove up to Log Spring to size up the trapping possibilities there preparatory to trapping in that locality.

The place was rolling hills covered with sage & an occasional Pinyon Pine about.

I again appraised the place as being the most likely trapping ground in the whole region where *Lagurus* might be found.

While I was searching about thru the brush Aunt May found a lone young Shrike & captured it.

The heavy clouds again darkened the sky but were tossed about by a high wind so only a few short showers fell during the afternoon.

Tho the wind was blowing briskly this evening I set the traps anyway, choosing a place where the thorny, thick-leaved brush was almost the only kind growing. This locality was just a few rods west of the old Palmetto Mill of 6100 alt. The end of the trapline ran down into the lowest part of the valley and thru a large patch of very luxuriant sage brush which incidently was the lowest point reached by this plant.

Coals or Silky Ground Squirrels reached their greatest abundance here and were fairly swarming.

July 6th 1922

My traps held a very short catch this morning having only seven *Dipodomys* and one *Perognathus m. magruderensis*. It wasn't so much what I caught this time but the importance of what I did not catch, as the *Peromyscus m. sonoriensis* was missing and that indicated that their lowest limit had been passed.

The water buckets were brought down this morning and by scooping out a small basin in a tiny irrigation ditch nearby full buckets were procurable. After an hours home work three *Citellus* were obtained by using the "Indian's drowning method".

Aunt May went out near camp to see if the Brewer Sparrows had again commenced to build nests - but was unable to find any activity. She collected two Greentailed Towhees and saw a Black-throated desert Sparrow.

At this location the occurrence of the latter would indicate the commencement of the lateral summer migration from the lower zones.

My traps were set one mile northwest of Palmetto alt. 6000 this evening thru a very mixed association having none of the brush or plants that had been found higher up. Lots of cactus prevailed, several different kinds being seen.

July 7th 1922

As I was coasting downhill this morning I had a terrific scare as a most horrible grinding noise issued from the inards of the Ford. I stopped as quickly as possible and gave the machine a thorough looking over but found nothing apparently wrong.

I timidly cranked it up and resumed the journey without hearing or noticing anything out of the ordinary.

My traps held only 8 *Dipodomys* this morning so now the limit *Perognathus m. magruderensis* seems to have been reached.

After getting my work completed for the day I went over the Ford examining everything I could without taking the "works" apart. However, I could find nothing out of adjustment or broken.

I set the traps again this evening well down in the valley 2 miles n.w. Palmetto alt. 5900.

This ground was different from anything yet worked and the chief vegetation consisted of a short scrubby light colored shrub only about a foot high.

This will be the last trapping I shall do down this valley as for the next miles or so there is only a rocky gorge where the wash goes down into Fish Lake Valley. Later - when I am established at Oasis I may resume the experiment trapping up towards the mountains at intervals.

July 8th 1922

The grinding noise again occurred in the Ford, scaring me almost out of the seat and another examination failed to reveal the cause.

My traps held two *Perognathus l. bangsi* and seven *Dipodomys*. After getting my work done I started in pulling the Ford to pieces. I believe the noise to be from the universal joint so started in building a scaffold with which to take off the rear wheels and driving mechanism.

I set my traps near camp this evening thru the same locality in which I caught the *Lagurus* some time ago.

July 9th 1922

My traps held one immature *Lagurus certates*, eight *Perognathus m. magruderensis* and seven *Peromyscus m. sonoriensis*. Only two of the latter were saved.

After getting any work finished I again went after the Ford but for all my work and trouble I was unable to find anything wrong. What the awful noise was caused by I haven't the least idea but it is certain to be the ominous warning of trouble.

In midafternoon the weather turned grey and sullen with promise of immediate rain so when evening came I decided not to set traps.

July 10th 1922

A few sharp showers occurred during the night but the day broke bright and clear, so after breakfast Aunt May & I took our guns, cranked up the Ford & went for a hunt on the northern slope of Mt. Magruder.

Just as I reached the summit a Coab was seen at the brace of the Jorn. Bench Mark and I shot him. This is the highest place I have seen them and apparently the elevation is no barrier to this species.

A little farther down the road towards Lida a flock of Pinyon Jays was encountered. I wounded one and was not able to find it while Aunt May killed one which had but a few days ago left the nest.

While I followed up the bunch of Jays trying to get a shot at them Aunt May found two nests - one was a Lead-colored Bushtit situated in the uppermost branches and near the main trunk of a Pinyon Pine. A short watch revealed the parents carrying small worms to the young inside so it was not molested & the other nest was a Western Gnatcatcher which was situated near the end of an oblique Juniper limb 10 ft above the ground. It contained four eggs which I broke in collecting it.

Driving down farther I turned into a wood road which led up a canyon wall onto the north slope of Mt. Magruder.

The hills all about were heavily forested with Pinyon and an occasional large juniper was seen. A heavy growth of sage occurred thru the canyon floor and thru open

places amongst the trees. Birds were very scarce. Aunt May saw two Spotted Towhees but was unable to get near them.

After a discouraging search we turned back, hot and tired and just after a refreshing drink of fine cold mountain water from a small spring the noisy "cheeping" of a flock of Bushtits was heard. Pursuing together we killed eight. They were the only birds excepting Greentailed Towhees and Brewer Sparrows that I had seen in this canyon.

After the bird skins were all prepared I cranked up the Ford taking a lot of extra traps, and drove up to Little Log Spring. One hundred traps were strung out thru the sage covered hills, tho, on a more careful search I felt skeptical regarding my success of finding Lagunus in the line tonight.

July 11th 1922

My prognostication last night proved correct as only 5 Perognathus m. magruderensis and ten Peromyscus m. sonoriensis were taken in the long line of traps. I feel certain I can find the desired animals so I will ~~xxxxxxx~~ try again in this general vicinity tonight.

This evening I set the whole string out near Stockade Springs which is situated a little farther east and a lot higher in elevation. Close scouting revealed no better prospects than I had last night.

July 12th 1922

My luck did not improve with last night's catch as only three Perognathus m. magruderensis and twelve Peromyscus m. sonoriensis were taken.

It was in a doleful mood that I turned towards camp, ten miles away after the second unsuccessful night thru a locality where I felt positive of success.

However, I was due for a surprise, for as I drove down a small gully near Log Spring an adult Lagunus ran across the road directly in front of me. That settled it! I certainly had to learn something in trapping these secretive animals and it seems needless to say that the traps were to be set in that locality this evening.

When passing the Ryan Stamp Mill on the way to camp Aunt May spotted three young Woodhouse Jays perched in the sage brushes near the road. I stopped the machine & she stepped out, collecting all of them.

I set the whole hundred traps out thru the gully this evening, placing them "double thick" all along the line.

On the way home in the canyon near Little Log Spring a Poorwill was blinded by the head lights and Aunt May shot it.

July 13th 1922

To my satisfaction the traps held two immature *Lagurus certatus*, for which I was pleased but readily saw that I would have to go deeper into the habits of these local animals if I wished to secure a good series, as the rules formulated by my experience with *Lagurus* in Vinton Plumas Co., California during 1917, failed here, absolutely. Not only was the general topography different but the flora also varied and accordingly, the habits of the *Lagurus* were coincident. Other things taken were sixteen *Peromyscus m. sonoriensis* and one *Perognathus m. magruderensis*.

Hitting on a theory that perhaps these animals were semi-diurnal the traps were left out until about 9 o'clock but the results were not justifiable as only two *Eutamias pictus* were taken.

As I was returning to camp about a mile north of Little Log Spring I found a 5 ton truck stuck in the road. Passing was impossible so we pitched in spending until noon getting the fellow over the short steep pitch.

I took more pains with the trap setting this evening but set the whole hundred as usual, thinking after the Logic of P.R.D. that if a few traps were good, a whole sackful would be better!

July 14th 1922

My traps held two fine adult *Lagurus* and as we were picking up the traps Aunt May saw a large *Lagurus* run into a small sage bush. A few traps were placed about the bush and returning in half an hour found another adult *Lagurus* had been caught.

The traps also held about a dozen *Peromyscus m. sonoriensis* and four *Perognathus m. magruderensis*. After getting the traps picked up I drove down to Palmetto where an hour was spent drowning out squirrels. Three were run out of their holes but only two captured. Sometimes they come out ~~when the first drop of water hits the hole~~ when the first drop of water hits the hole and are then very agile, making their escape before I could grab them.

This evening I reversed tactics in the trap setting and only put out about 25 traps. These were very carefully placed and a great deal of careful searching was made for a sure place before each trap was set.

July 15th 1922

For the extra caution in setting the traps last night, I was amply rewarded this morning, as nine *Lagurus* were taken from the short line - besides *Perognathus m. magruderensis* and several *Peromyscus m. sonoriensis* of which none of the latter were saved.

Several days ago the foreman at the placer mine nearby told me of a wonderful view of Death Valley obtainable from a mountain peak a mile and a half south of Log Spring and that the road ran right to the vantage point. So it was decided to motor over there, leaving the traps out while gone.

The scene was indeed beyond description, not alone was the great scope of country visible, too grand for words, but the immediate foreground rivaled the Grand Canyon.

A great fault occurred here and it seemed to show the composition of the whole inside of the earth for several thousand feet down. The vivid colors of the heavily mineralized earth were wonderful in the early morning sun as the yellows, creams and ochers of the serated cliffs were accentuated by the shadows in the intervening ravines.

The mountains all around this precipitous area were heavily forested with Pinyons and large Mahogany trees and they grew to the very brink of the cliffs, in some places standing out in picturesque splendor on the skyline.

A heavy blue haze hung over the Death Valley region - heat - haze - I may guess correctly, obscuring the distant view in that direction but to the west the ragged snowclad ~~xxx~~ Sierras were visible for nearly their whole length. An inspiring view it was - and unique too, as both the highest and lowest point in the United States were visible in almost the same glance and it might be added that there was considerable difference in temperature between the summit of Mt. Whitney and the bed of Furnace Creek, even at that early time of day!

The plaintive call of a small Flycatcher nearby put Aunt May on the alert and I went back to the machine, a few rods away, after the gun. Meanwhile the bird had been located by Aunt May and to her astonishment, was building its nest on a horizontal Pinyon limb. The structure was barely commenced and when I returned with the gun the collecting was postponed. Then, I too, sat down to get a closer view of the bird and upon its next visit to the nest site, I was astonished to see what I firmly believed to be a Gray Flycatcher. However, this sort of identification\*\* must not be considered final, and so the birds were left to finish their nest with positive identification uncertain, tho the bird fitted all my field identifaction points of

\*\* in the *Empidonax*



genus. Situated about 3 ft. above the ground in a nest dug in the trunk of a live Pinyon farther up the slope Aunt May found a Red Shafted Flicker's nest from which issued the noisy chatter of half a dozen featherless infants. She also heard the call of a Woodpecker of some sort but a thorough search of the woods failed to reveal the originator of the call.

Returning to the trap line I was pleasantly favored with three more *Lagurus* and a couple of *Eutamias pictus* and it was with a smash of satisfaction that I totaled up my catch of *Lagurus* to twelve for the night! I reset the traps again thru the same locality this evening.

As we were driving up canyon near Little Log Spring a small bunch of Mt. Quail run across the road. Aunt May collected three of this number of which but one was saved.

July 16th 1922

My joy at yesterday's success was due for a hard jolt this morning for not one single *Lagurus* graced the traps. However, that was to be expected as how could I hope the supply to be inexhaustible from an area of only two hundred feet in length. The rest of the catch told only too plain that the animals had been caught out as only 1 *Peromyscus m. sonoriensis* and one *Perognathus m. magruderensis* of the resident animals were captured tho 3 *Eutamias pictus* were taken. However, they could easily range a hundred yards from their nests and have wandered into the traps.

I spent the rest of the day after getting up the skins, writing notes. The day was fearfully hot, being 98° in the shade, and every turn I puffed and sighed, my thoughts roamed back to Furnace Creek wondering how the mercury stood there and thanking my good fortune that I was not in those parts.

This evening Aunt May and I went over to the locality where I had taken two *Lagurus* near camp, putting into practice the knowledge gained about *Microtinus* in my recent experience.

I was much surprised to find how close I had set traps on former occasions to the inhabited areas of these mice, without success.

July 17th 1922

My traps held six *Lagurus*, one *Reithrodontomys*, one *Perognathus m. magruderensis* and two *Peromyscus m. sonoriensis*, the latter were not saved and I again was forcibly struck by the nearness I had set the traps, without success, on former occasions.

The day again was very hot and sultry with the mercury at 96° all afternoon.

I set thru the same area this evening putting a trap in every possible exit from the colonies. About sundown large banks of clouds came up from the northeast and by bed time the sky was overcast.

July 18th 1922

The traps held but two *Lagurus* this morning and after getting them prepared I started in building boxes in which to pack the accumulation of specimens.

In the middle of the afternoon the storm broke with a torrential downpour and we had to stop working with the specimens, getting them under cover as the cabin leaked badly and there was not enough dry space to keep the stuff out.

I could not set traps this evening as the storm grew more violent with the setting sun.

A most unique phenomenon it was too, as the western horizon was clear and the setting sun shot its bright rays under the precipitating clouds giving an effect of lightning to the rain drenched landscape that I never before had the pleasure of seeing.

July 19th 1922

We resumed the packing again this morning hastening with all speed as the sky was again overcast with promise of another rainy afternoon.

Considerable difficulty was encountered when packing the nests and Aunt May had to trim the limbs very short in order to make room in the few boxes for all of them.

As it did yesterday the weather resumed it's inclemency causing another break in the work which we were anxious to finish. The storm today seemed harder than yesterday and during the afternoon, over an inch of rain fell.

July 20th 1922

The morning broke bright and clear - with wonderfully clear, cool zephirs which exhilarated one to the upmost - a day that even a pessimist could not fail to appreciate.

The nearly completed packing was finished with dispatch and I took it down to Lida so the shipment would leave on the noon stage.

While I was away Aunt May killed a Woodhouse Jay from its perch on a bush near the cabin.

It was also decided to move camp and thru the kindness of Mr. Collins a comfortable house was placed at my disposal while working in the vicinity of Lida.

Just as the loading of the Ford was completed a slight sprinkle of rain fell from the advancing tunder-clouds which were rapidly filling the sky and we were barely in time, on our arrival at Lida, to escape a drenching storm, which seemed to flood the country. Fortunately it was of short duration and by evening the

ground was dry enough to set the traps.

The line was strung out west of town thru the sage association.

July 21st 1922

My traps held 12 *Perognathus m. magruderensis* only and it seemed odd that *Peromyscus m. sonoriensis* were not present.

I intend to work this place eastward, well out onto the plains as I did westward, showing the different associational condition on this slope.

Mr. Collins informed me that pocket gophers were taking a small field of alfalfa that he owned and which was located a short distance below his house, so in the afternoon he and I went over the patch setting all my traps.

This evening I set my mouse traps thru a small damp meadow bordering the alfalfa field. Careful search was made for *Microtus* sign but none could be found.

July 22nd 1922

My gopher traps held five specimens and the mouse traps three Harvest Mice and two *Perognathus m. magruderensis*. The latter were caught in a wild rose thicket which was growing near the alfalfa patch.

I reset the gopher traps and on going over them after lunch took out four more gophers.

This evening I reset the gopher traps and again strung out a short line of traps thru the willows which were growing along the dry stream bed.

Close scouting failed to locate any signs of *Microtus*.

This afternoon several boys camped nearby came back from Pigeon Springs where they had been on a side trip. As boys will go they had taken their guns and had killed three Bluewinged Teal from the small pond near the old stamp mill. On questioning them they informed me "six teal ducks were in the flock" & on examining the birds I found one to be an adult ♂ and the other two were young, in the post-juvenal plumage.

The boys also told of killing a porcupine as it was descending from the upper branches of a Locust tree near the housees. This fact struck me as peculiar for the nearest Pinyon trees were a good third of a mile from the shacks and went to show that the porcupine had lost its direction, getting out of the conifers into the sage flat, and was ready to eat on any kind of tree that had bark on it!

I was rather surprised to learn that porcupines inhabited the Pinyons and had seen the first actual evidence

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a few days ago when Mr. Collins was found barely holding down his dog while another fellow was extracting quills from the dog's mouth with a pair of pliers.

Partially barked trees had been noted several times both by Aunt May & myself and tho I not regarded as I am always hesitant to commit myself on any dubious observation unless I know the positive signs or actually see the bird or beast and know them well.

July 23rd 1922

My traps held three gophers and the mouse traps were empty. I looked over the old holes about the field and found several had been plugged up so reset the gopher traps in these.

On looking at the gopher traps after lunch I found part of them plugged up and no specimens captures. This was ~~disconcerting~~ disconcerting but I set to digging with a large shovel and reset the traps again.

In my whole dozen gophers, so far, I have but two adults and I attribute this fact to the slyness of the adult animals.

I set my mouse traps thru an area covered with very tall bunch grass - some of which was fully six feet high, growing in a semi-marsh below the big spring.

The place did not look promising but I want to determine the associational habits of even the common animals regardless of the quantity of specimens captured for preparation.

July 24th 1922

My mouse traps held one *Reithrodontomys* and one *Peromyscus m. sonoriensis*.

It seemed incomprehensible to me that the life thru this damp grassy place should be so limited.

I hadn't expected an abundance but at least hoped for more than single specimens. My gopher traps were plugged again so I gathered them up with disgust finding new places to set them.

Locating a recently raised small mound, I work the big round pointed shovel deep into the soft ground with one thrust and on prying out the shovel full of dirt I saw some dry grasses protruding from the opened gopher-hole. I knelt down extracting a handfull and upon shoving my hand back into the hole was suddenly startled at touching a live gopher in the nest. Grabbing the large spoon I began to investigate and found a nearly full grown gopher trying to dig his exit from the place. Apparently with the quick thrust of the shovel I had cut off his only retreat

from the den. This was the first time I have ever collected a gopher from his hole using a spoon and my bare hands for a trap!

My experience during the last two days has been most extraordinary with the animals, as on two occasions, while digging out a hole in which to place a trap, I have heard scratchings within and quickly inserting a set trap have caught the gopher within a few seconds, in fact once my fingers had scarcely let go of the trap itself. In both cases the animals were quite young.

I looked at my gopher traps about 2 p.m. finding three specimens had been taken. I reset the traps in an Indian's garden nearby.

I did not set small traps this evening as 10 days have passed since Aunt May located the Flycatcher's nest near Log Springs and I believe it should be looked after.

July 25th 1922

My gopher traps held five specimens this morning and not wishing to spend the time I did not reset them.

After getting up the skins we started out for Log Springs but not far did we get for the ominous sound heard a week or two past developed with a rip and a crash. Truly I thought the end of the Ford had come, fortunately it was all down hill to camp, where I arrived without further disaster. Needless to say the rest of the day was consumed with the Ford. Fortunately, after removing the transmission cover I discovered the trouble in a stripped lining which was easily replaced.

I reset part of the gopher traps but did not set the small traps as I will again try to get over to Log Springs tomorrow.

July 26th 1922

My gopher traps held a single immature specimen and after getting it up, Aunt May, two neighbor boys and I left for Log Springs, taking our guns and a lunch.

We arrived at the destination in due time after an uneventful journey.

The two collecting guns were given to the boys with instructions to bring in anything with feathers while Aunt May and I looked up the Flycatcher's nest.

This was soon found and upon examination, the nest seemed to be ready for eggs. It was a beautiful structure, composed of shredded bark wrapped around and around and unusually heavy material for Flycatchers, much coarser than I had ever seen before in other Empidonax nests. The inside was lined with large feathers, gleaned from some unknown place near by, but how the bird managed to find so many in such an isolated place was beyond my comprehension.

We spent several hours prowling about and the boys with usual vigor tramped and hunted with persistency but to no avail and not a single bird was collected.

Returning, a pair of Western Reid-tailed Hawks were seen perching in a dead Pinyon Pine amile or so north of Little Log Springs. A long chance shot was taken at them without results.

Stopping at the ranch near my old camp I asked the owner how many squirrels were about and was informed they were getting scarcer. Apparently the old fellow thought he was beginning to get the best of these animals with about  $\frac{1}{2}$  an ounce of strichnyn which I had given him.

However, from my own observations this morning I find these animals have started their annual hibernation as only one tiny-young one was seen over the whole distance between Pigeon Spring and the old camp, where, during the days that I was running traps in that vicinity many were seen every trip.

With this subject now under consideration it might be well to state here that not one has been seen about Lida for the past week, in fact none since moving down here when arriving in this region June 17th these Citellus were swarming.

I am very sorry that I was not camping in a place where these animals were abundant, so some conclusive observations could have been made, as I am most interested in their peculiar habits. Tho the time of the commencement of their hibernating period might safely be stated as starting when the annual plants have fully matured and the harvest of ripened seeds gathered.

I set my traps this evening  $\frac{3}{4}$  mile east of Lida in the next association below the sage.

July 27th 1922

As I was driving down to get in the traps this morning I was suddenly startled by a crash - bang - in the Ford and the wheels locked. The worst had happened, so leaving the machine by the road side I walked down and picked up the traps.

The catch consisted of two *Perognathus l. bangsi*, one *Peromyscus m. sonoriensis*, an immature *Peromyscus* that I could not identify with certainty and a *Perognathus* that appeared to be *P. p. stephensi*.

Two of the small boys were with me and with the assistance of a stray dog caught a young cottontail.

Getting back to the disabled machine I found the neutral gear in the "perfecto" would free the wheels so the three of us pushed the machine up a steep hill, back to camp.

After getting up the skins I started to take the Ford to pieces searching for the trouble and worked at the job until dark.

July 28th 1922

It was discovered last night that the pinion gear in the differential had lost several teeth and that in consequence the whole differential assembly would have to be taken apart. As there is no skillful workman or garages about I had the task to perform myself so started in studying carefully the "perfecto" directions which I had kept against such an emergency.

By 10 o'clock this morning I had the whole thing apart and taking such parts that I needed to have replaced, I stood by the roadside waiting for someone bound for Goldfield to pass. Good fortune prevailed and by noon the damaged parts were on their way.

I had heard some old miners around here talking of bats they had seen in some of the tunnels nearby so the two boys and I spent the afternoon going thru some of the mines looking for bat roosts.

I found several places where a few straggling bats had roosted as the scattered feces on the floors indicated, but no bats were found.

I had the 410 with me and on a rocky side hill a Poorwill was collected. It proved to be an immature male and a nice addition to the small series of young taken in this vicinity.

I did not set traps this evening as there is no different association within walking distance of this place and I now have an ample supply of available material from this sage country.

July 29th 1922

Taking the gas lantern instead of the flashlight with me, we resumed the exploration of the tunnels this morning and after several hours of steady search we returned at noon empty handed.

The parts for the Ford came about noon so I started to get the complex piece of machinery back together. During the afternoon rain fell nearly an hour greatly retarding my work. Darkness found me still stumbling along with many unassembled parts yet to be put in place.

July 30th 1922

After much work I finally succeeded in getting the Ford together again and a trial trip proved that it would work. How long, I could not say.

I again resumed the trapping this evening, setting two

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miles east of Lida at an elevation of 5800 ft.

The greatest part of the line was set down the bed of the canyon and I was not very well pleased with the general aspect.

When I passed up this canyon on June 17th coming in to Lida, I saw countless numbers of *Citellus*, but now on looking the region over, I did not see a single animal and close scrutiny of a number of burrows entrances, which undoubtedly belonged to this species, proved that there had been no active animals for some time.

The other section of my trap line was strung up a draw which ran north from the main canyon but giving the south exposure. This same object was kept in mind when setting down the west slope of these mountains so an analytic comparison would be possible, each slope having been worked in precisely the same way.

The sky was heavily overcast and a light drizzle was falling with prospects of heavier showers later on. This was not at all promising for a good catch tonight.

July 31st 1922

It rained hard during the night and the sky was still overcast at daybreak. The heavy weather tallied badly in my catch as but five animals were taken - one *Dipodomys*, one *Oryzomys*, one *Perognathus m. sonoriensis* and two *Perognathus*. The latter look like *P. p. stephensi*, tho I am uncertain.

The weather was dull all day and about three this afternoon rain commenced violently, continuing until bedtime. This prohibited my trap setting and I am beginning to feel the recent delays badly.

August 1st 1922

The day was spent checking over the notes, minding traps and a dozen odd jobs that needed attention. The sky was still heavily overcast, in fact there had been no sunshine all day and several hard showers had fallen. I set again in the same place I had set July 30th, as I had not taken a fair representation of what I knew I could catch in that association. To be exact regarding the trap line as the reader might take it for granted that I had reset exactly the same place, I wish to state that only the draw was used and the main valley entirely omitted. On further consideration of the fact that small animals were entirely lacking in the main valley, I believe the swarms of *Citellus* responsible, as they cleaned out all the annual shrubs on which small animals depend for subsistence. Of course this feature might be again re-balanced when the squirrels were scarce and plenty of vegetation existed as then the small animals would again crowd in from the sides where they had taken refuge.



August 2nd 1922

My traps held a fine catch this morning, despite the cloudy sky and wet ground, tho there were no showers during the night.

The traps held one *Neotoma i. deserti*, one *Omychomys*, three *Perognathus l. bangsi*, 4 *Perognathus (P.p.stepheni??)*, one *Peromyscus m. sonoriensis* and two *Peromyscus e. stephensi*.

The inclement weather still holds on with intermittent showers, some of which are extremely violent. Old residents here say it is most unusual this time of the year as late June and early July is usually the rainy season.

About 3 o'clock this afternoon the storm settled and rain began to fall violently amid a wonderful display of lightning which dashed here and there over the tops of the surrounding hills.

This deluge kept up until well into the night so trap setting was impossible.

August 3rd 1922

Not having any specimens to prepare it was decided that we take a look at the Flycatcher's nest which was left on July 26 in a completed condition, tho as yet no eggs.

Arriving at the nest site in due time, after an uneventful journey, the nest was found to be deserted and in a badly watersoaked condition from the recent hard rains. Returning by the placer mine, I had an "eyeful" when I witnessed the cleanup of the sluice boxes. I always thought the collecting of a rare bird or a rare set of eggs gave one a thrill, but oh! that shovel full of Gold! Yellow and glittering in the sunlight!

The clouds had again overcast the sky and camp was hardly gained before the afternoon rain commenced.

Fortunately, the shower lasted but an hour or so and by five p.m. the sun was shining as nothing had happened!

I set all my traps this evening near the mouth of the canyon at an altitude of 5500 ft and I called the locality "3 m.e.Lida-Esmeraldaton-Nevada".

The association on the eastern slope of these mountains are not so nicely defined as I had found them on the west and my line this evening appeared, from botanical standpoint, to be most similar to the one chosen and trapped in on July 31st and Aug 2nd.

The heaviest brush cover was found in the bed of the wash and my whole line was set along this course.

August 4th 1922

My traps held a fair catch in spite of a heavy shower which fell during the night. The following specimens were taken: two *Oryzomys*, three *Peromyscus c. stephensi*, one *Perognathus (p. stephensi?)* and eight *Perognathus l. bangsi*.

I called the latter (*P.l. bangsi*) but have doubts that is their true identity.

This evening I set my traps farther down the detrial slope at an altitude of 5350 feet and  $4\frac{1}{2}$  m.E. Lida-Esmeralda Co. Nev.

This locality was in the center of the tree yucca belt tho I doubt that this growth has any influence whatsoever on the mammalian fauna.

Part of the traps were set on the mesa like slope. The place did not look as tho it was inhabited by small animals and had a peculiar aspect, for the wind had blown away all loose soil leaving a pebbled floor that had been burned almost black by the desert sun. The scattered bushes were stunted and sparse of growth with an occasional tree yucca here and there.

The greater part of the line was set thru the wash and here I found a few different shrubs and more of a variety than encountered last night.

Numbers of low cholla cactus were growing here and were well covered with bristling spines.

Some of the thorn bushes were just coming into leaf, which seemed unusual, and I believe it to be

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(continued next note book)

the second crop as from my observation the place was well inhabited by the *Citellus m. stephensi* and they must have stripped the brush of the succulent leaves.

August 5th 1922

The traps set on the mesa held three of the small *Perognathus l. bangsi* and many of the traps were sprung, with parts of the diminutive mice's tails still held fast.

The traps in the wash held the greater part of the catch and a nice variation in species too! This catch contained two *Omychomys*, two *Perognathus (p. stephensi?)*, three *Dipodomys* and five small *Perognathus l. bangsi*.

I was glad to find this occurrence of many species in the wash as it proved a point to me in my pet theory and showed what the topographical influence could be in relationship between the many things in nature.

My traps were set at an altitude of 5200 ft this evening and  $5\frac{1}{2}$  m. E. of Lida.

This locality was just below the tree yucca belt and thru the scattered, low bushes which were growing there.

Aug 6th 1922

My traps held seventeen small *Perognathus l. bangsi* this morning and not another species was represented.

This afternoon four indians and a cowboy came into town chasing a wild horse and excitement ran high, as they ran helter skelter over the sage flats, now this way and now that. Good horse races are not always on the race track and this one was now on its second day's race for they had been at it most of yesterday coming up from the direction of Hornsbee.

They finally chased the beautiful wild animal into a barbed wire fence and she made her escape in spite of the wounds.

Traps were set well down towards the lowest level of the wide plain this evening and at a point south of Jackson Mountain at an elevation of 5100 ft.

Associationally it appeared to be the same as last night.

Upon returning to camp I learned that two indians on fresh horses had captured the wild horse and a beautiful chestnut Bay she was with a flowing mane that reached six inches below her arched neck, a foretop that reached her nose and a tail that nearly dragged the ground. The cuts from the wire fence had soaked the animal's legs in blood, truly a crime to mutilate such a horse.

Aug. 7th 1922

My traps held six small *Perognathus* and one of the larger ones probably *P. p. stephensi*!

It appears as if a barren zone might exist farther down the slope and my interest deepens as I keep setting farther down the valley.

I set my traps farther down the flat this evening, at an elevation of 5000 ft.

This place did not appear different in plant life from the place trapped in last night but was about half way to the lowest place in the country thru which I have intended to work. The soil here was more sandy and did not have the covering of small pebbles.

Aug. 8th 1922

A heavy wind sprang up during the night and by 3 in the morning rain was falling. I was forced to move my bed from the front porch to the interior of the house. My traps were routed and the catch contained one *Dipodomys*, two *Perognathus l. bangsi* and one *Perognathus (p. stephensi?)*

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The storm continued to precipitate spurts of rain all during the forenoon but about two p.m. the sun came out with all its summer intensity, drying up the results of the past storm.

I again set my traps thru the locality trapped in last night as I was not satisfied with the catch.

Aug. 9th 1922

The storm returned about 9 o'clock last night driven back by a brisk north wind and my traps were a mess this morning. The all night soaking had curled them up so badly that about half of them would not spring.

The whole line held but a single *Dipodomys* and I received a thorough soaking in a drenching shower while picking them up.

Getting back to camp I found Mr. Collins preparing to go to Goldfield and as he was making the round trip today and alone I decided to go along as there were a number of purchases I desired to make in town.

I returned in ample time to set my traps this evening and strung them out along the wash in the middle of the valley at an altitude of 4875. This locality had a heavier growth of brush and the soil was more silty than any I had found thru the whole reins of settings.

Aug. 10th 1922

A fair catch resulted from my efforts last night when five *Dipodomys* and three *Perognathus l. bangsi* were taken.

My traps were in poor shape from the two nights rain and the damp ground last night, so I laid them all out to dry this morning and in the afternoon gave them a fresh coat of white paint.

Aug 11th 1922

I gave the traps another coat of paint this morning and started to pack up in preparation to moving to the next collecting station tomorrow.

Aug 12th 1922

Everything was packed and after the mail came in we left for Oasis - Mono Co - Calif, the next collecting station.

The route lay west over the summit and down into Fish Lake Valley passing Pigeon Springs and Palmetto regions, all of which has been described in former notes during the past two months.

A lad named Lee Tawny of Goldfield with whom I had become acquainted while he was on a short stay in Lida accompanied us. He seemed to be unusually active and would

be considerable help to us about camp and with the traps.

Stopping at Palmetto at the indian camp we watched the two pet Pinyon Jays a few minutes and indeed thought them to be the finest pets yet.

They were more mischevious than ever , and into every thing. An old indian sat rolling a cigarette and just as it neared completion he held it by one end to settle the tobacco, the jay spied it and lit on the indian's hand, inserting its closed beak into the open end of the cigarette end - then opened up the beak, splitting the paper and [ spoiling the smoke.

This same indian later laid his coat down with the tobacco sack and papers in the pockets. The jays proceeded to search the garment, finding the papers one bird started off with them but was caught in the act and received a scolding in indian. This, the birds resented and answered back vociferously.

A mile or so below Palmetto I passed the place where I last trapped in that vicinity. Entering the narrow gorge of Palmetto wash the road wound thru the stream course nearly a mile. The vegetation thru the gorge was greatly influenced by the annual spring floods and numbers of plants were growing here that belonged to zones above.

After passing out of this rocky gorge, the valley widened and the same association occurred for some distance, in fact almost until Fish Lake Valley was reached.

As I had said last year Fish Lake Valley was extraordinarily interesting and as I intend to work the place carefully both length and breadth let it suffice to say that the associations were plainer here than any region I had yet seen, tho I must confess that with each new camp wherever it might be, I see things plainer. I thought last year that I could read sign very well but with the past experience this season my efforts last year seem very rudimentary.

Indeed, as I crossed the valley I grew very enthusiastic over the place and made many prognostications regarding the habitations of many animals.

Wide areas were seen that I am positive had an abundance of such rare animals as Microdipodops and at least two kinds of Dipodomys.

Arriving at Oasis I was permitted to camp in a large grove of very big cotton wood trees. The wind was blowing severely but abated about sunset.

I set my traps thru the brush near the south line of the ranch. This brush was nearly all sage but the nearby fields probably had a great influence on the mammalian life here.

Aug 13th 1922

My traps held 19 *Dipodomys m. meriami*, two *Omychomys* and one each of *Peromyscus m. sonoriensis* and *Perognathus l. bangsi*.

After getting my skins up I went up to the Post Office and while chatting a moment with Mr. Stewart, the owner of the ranch, a Cooper Hawk darted down right in front of us and seized a small black chicken. The chicken proved too heavy for the hawk to carry off and while it was struggling with its prey one of the Stewart boys got a gun and shot it.

I set my traps  $\frac{1}{2}$  mile south of the ranch at an altitude of 5055 this evening and in a low scrubby brush association with no sage in it.

Aug 14th 1922

My traps held 13 *Perognathus l. bangsi*, three *Dipodomys* two *Dipodomys m. meriami* and one *Omychomys*.

The two *D.m. merriami* were taken at the first of the line where traps had been set within 100 ft. of the sage belt and the three other *Dipodomys* were taken on the eastern end of the line where it verged on another association.

I set my traps  $1\frac{1}{2}$  m. S.E. of Oasis this evening at an altitude of 5050 ft. This association was but slightly different from last night's trapping ground but had a finer soil. A small boy working on the ranch brought me a long-eared owl today.

Aug. 15th 1922

My traps held eight *Dipodomys*, one *Omychomys* and four *Peromyscus m. sonoriensis*.

The animal life of this locality seems to be very interesting as the habitats of both *Dipodomys m. merriami* and *Perognathus l. bangsi* seem to belong to different associations than I had trapped in last night.

This evening my traps were set on the western edge of the vast area of *Microdipodops* ground and I will prove to my own satisfaction whether or not my reading of their habitats is correct. ~~So I await the~~ So I await the morning's result anxiously. The locality is called 2 miles S.E. Oasis alt. 5050.

Aug. 16th 1922

As was expected my traps held seven *Microdipodops*, but unfortunately one was destroyed by other rodents, the traps also held four *Dipodomys* and two *Omychomys*.

A violent wind started up at sunrise this morning and at trap setting time was going its worst so I was unable to put the traps out.

Lee had been begging to go hunting lately so today I have him the 410 and seven shells loaded with no.10 shot.

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I didn't wait long for results for in a very short while he came into camp with a neighbor boy, 5 Pintail Ducks and an avocet. He was in his glory and it brought back memories of my own younger days of similar experiences. He wanted more shells and said he was sure he could find more but duck hunting did not meet my approval and I had to forbid tho I certainly hated to. The part of the hunt that puzzled me was how could he slip up on such wary birds and get close enough to kill them with such light shot? When I gave them to him I secretly thought that he could do but little harm, but the ability of boys is puzzling some times, when they try.

Aug 17th 1922

I saved two of the Pintail Ducks and the avocet, wrote up my notes and after lunch drove over to Deep Springs Valley to again see the place.

Looking it over from a critical standpoint, I saw many places where I could have done better, tho this is bound to be, as the years of experience roll by.

Getting back about sunset I set the traps thru the same locality as last trapped in, hoping to round out the series of Microdipodops as they might not be so abundant farther westward.

Aug 18th 1922

My traps held five Dipodomys and six Microdipodops.

The daily wind came up earlier today than usual blowing so hard that life about camp was miserable for sand with a good mixture of pulverized sheep manure was blown into everything making the noon meal impossible.

Good fortune prevailed, however, as the tempest receded early enough so that a good meal was obtainable before setting the traps.

Traps were set 3 miles s.e. Oasis alt. 5150 this evening, and the general appearance of the place gave prospects of an abundance of Microdipodops.

This place began showing the influence of the Silver Peak range, which bounds this valley on the east, as a peculiar species of native grasss which grows abundantly in those mountains was found here.

Aug 19th 1922

My traps held 10 Microdipodops, three Omychomys, four Dipodomys and five Perognathus l. bangsi. The latter species came as a surprise but I remembered they sometimes occupied the same habitat as Microdipodops from my Burton Station exposure, tho by very limited numbers.

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I set my traps 4 miles S.E. of Oasis alt. 5200 this morning and the association began to be mixed - this was due to the washing effect of Palmetto Canyon toward which I am trapping in a direct line.

However the prospects of Microdipodops are yet very strong but I expect other things to begin showing up in greater proportions. The wind was blowing rather briskly at trap time this evening.

August 20th 1922

My traps held 11 Microdipodops, 10 Perognathus l. bangsi, three Onychomys, one Dipodomys and one Peromyscus. The latter looks very much like P. l. truei but what that species can be doing down on this flat country is beyond me at any rate, any Peromyscus other than P. m. sonoriensis would have seemed out of place here!

I set my traps in a very common type of country this evening but the locality designation seemed very extraordinary being along the Mono-Inyo Countries Calif.-Nevada boundaries, alt. 5200.

I had to set here in this place because the valley begins its blending with the Palmetto wash and I want to work the place most carefully.

August 21st 1922

My traps held an abundant catch, 17 Microdipodops, four Dipodomys and one Perognathus l. bangsi.

A violent wind started up early and grew so fierce that about noon a limb 6 inches in diameter was broken under which the Ford was parked and fell within a few feet of the machine.

I could set no traps this evening on account of the violent wind.

August 22nd 1922

The wind blew violently all night covering every thing and every body with a coat of mixed dust and sheep manure. Life here is anything but pleasant during such wind storms.

Having no specimens to work on it was decided to look over the collecting possibilities in Cottonwood creek. I was told that a road ran several miles along the water course so after breakfast I cranked up the Ford and started out.

After entering the canyon the road became very sandy and when a half mile of hard going had been traveled the Ford was abandoned. Sage brush grew abundantly all thru the canyon and in some places I saw bushes that were at least twelve feet in height.

A few scrub willows and birches grew along the creek but the most surprising thing was the apparent bareness

of the water course. From general appearances I judged the Spring floods kept vegetation reduced to a minimum as the descent of the canyon was unusually steep.

I saw but few birds and only three that were of interest, a Woodhouse Jay, a Bluefronted Jay and a Nevada Towhee and I failed to get a killing shot at any of them.

I walked about five miles up the canyon but found no place that offered good trapping.

Returning to Fish Lake Valley I found the wind raging with a heavy bank of clouds in the sky to the southwest.

At sundown the storm was still raging so no traps could be set.

August 23rd 1922

The wind moderated during the night so all of us went hunting this morning.

Birds were numerous but only a small variety. Swarms of linnets were feasting on the ripening grain and a large flock of mixed Black-birds were flying about. Six birds were collected, three yellow headed Black-birds, a Western Lark Sparrow, an immature Calif. Yellow Warbler and a Western Night Hawk.

The waste water from the fields formed a small pond near the north line of the ranch and many Killdeers were seen about its edges and from beside a small ditch a spotted Sandpiper was flushed.

By ten o'clock the wind had again started up violently and by the time camp was reached was blowing with such violence that skinning birds was impossible.

Towards evening the storm was moderating and heavy clouds enveloped the sky. I set the traps again this evening, farther up the slope at a locale to be known as Mouth of Palmetto wash- Esmeralda Co. Nev. alt. 5350.

The line covered two associations, one was up the sandy wash bed and the other was on the rocky wind swept flat nearby. The whole string being set in the shape of a horse shoe. Both ends of this line ran into Microdipodops ground and I anticipate an interesting catch in the morning.

August 24th 1922

My traps held a surprising catch as I had expected. The most unusual animal taken was *Perognathus m. magruderensis* which occurred in the wash. I was very glad to get a specimen of this species at this altitude and hope I catch a good series, as the specimens taken last year near the mouth of Wyman Creek were called

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*P.m. olivaceus* by D.B.D. who claimed altitude controlled the two subspecies. As I had predicted, *Microdipodops* occurred at the end of the line. Evidently this was the eastern edge of their habitat in the valley and was plainly visible.

The traps in the wash held three *Microdipodops*, three *Perognathus m. magruderensis*, eight *Perognathus bangsi* and a single *Dipodomys* while the traps on the bench held two *Dipodomys*, seven *Perognathus l. bangsi*, one *Peromyscus m. sonoriensis*, one *Oryzomys* and the tail of a *Microdipodops*. This latter animal's tail was taken from a trap where the line verged into the valley floor.

Aunt May put up the three Yellowheaded Blackbirds taken yesterday, the other had spoiled.

The winds of the past five days had gathered up a sky full of clouds and today they gave signs of rain. Showers occurred all thru the day and were heaviest in the evening so no traps could be set.

August 25th 1922

I shot a few Yellow Warblers out of the Cottonwood trees about camp and while I skinned them Aunt May and Lee went hunting thru the fields on the north side of the ranch.

Many birds were seen, the greatest abundance of which were Linnets feeding on the ripening grain.

A mixed flock of Blackbirds were seen and by good fortune the twelve gauge was discharged in their midst killing thirteen specimens, 8 Yellowheads, three female Nevada Redwings and two immature Nevada Cowbirds.

Aunt May singled out a small cowbird at the same time and it proved to be a Dwarf.

Other things they collected were single specimens of each Greater Yellowlegs, Killdeer and Calif. Yellow Warbler.

Mrs. Stewart reported a gopher was destroying her garden so I set two traps in the peanut bed where the rodents were especially active.

About 5 p.m. I started out to set traps, but on getting out from the ranch a ways I decided the effort would be useless owing to the windy threatening weather so turned back.

I had noticed a small bat flying about so watched for it this evening but in vain. However, a Poorwill flew past and was killed by Lee, with a fortunate chance shot, as it was far too dark to shoot accurately.

August 26th 1922

My gopher traps held two specimens.

A most violent wind came up this morning with the rising sun and while I stayed in camp to get up my gophers Aunt May and Lee went hunting.

They had poor success as the wind had the birds under cover and but few were found. They killed three Desert Horned Larks and a single Yellow headed Blackbird. The latter was the only one seen and was probably hit by a stray shot yesterday when the "pot shot" was fired into the large flock.

In the afternoon several showers fell from passing thunderclouds and later I drove over to Padmetto wash to set the traps but on my arrival there the weather became worse instead of better as I had hoped so no traps were set and I barely arrived at camp in time to avoid a thorough drenching.

Aug 27th 1922

The day broke clear after a stormy night and as Aunt May was not feeling well Lee and I went hunting down thru the field and orchard.

In the orchard, hordes of linnets were seen and their depredations were evident as the ground was covered with bird pecked apples.

Two Western Tanagers and a W. Woodpecker were collected there and down thru the oat and barley fields birds were abundant. On close scrutiny they were found to be mostly Linnets and Brewer Sparrows.

A few Lazula Buntings were seen and as usual, very shy, tho I did secure one immature. I was greatly handicapped in collecting about the fields as the owners did not want anyone walking thru the standing grain and the birds seemed to be aware of the fact.

A single Lark Bunting was seen and by good fortune, collected.

A small bunch of Valley Quail were seen near the fields but as I was stricktly forbidden to kill them on the ranch I had to respect the owners wishes. I have been patiently watching my chance to get these quail off the ranch but my chances are rather doubtful as the place is over a mile square, in reality 800 odd acres, and the birds seem to cling closely to the cultivated area which is located in the middle of the ranch.

Another wounded Yellowhead was picked up along the Lane. The storm again gathered this afternoon and by trap setting time was raining sharply so no traps could be set.

Aug 28th 1922

This morning we all went hunting in the Ford, driving around the ranch in hopes of finding the Quail outside but had no such good fortune.

Two pintail ducks were seen swimming in the main ditch and as I began to creep up on them they were forced to swim upstream against the current. They soon decided they could make but better progress that way so took to the bank and began to walk! Getting in range I killed them both. My shots frightened about a dozen smaller ducks to flight from their resting place a short distance away and as they swung past the Indian camp nearby three of their number were killed by a watching indian. I saw these ducks a few minutes later and found them to be green winged teal.

A few days ago I had been told of a pet magpie that an indian family had, so being in the neighborhood stopped in to see the bird. I was amply repayed for the visit and enjoyed fifteen minutes of the most sidesplitting laughter.

The bird would not talk when strangers were present so after all of us were out of sight, but well within hearing, the old squaw commenced making the bird talk.

I was as much amused at this procedure as in what the bird was saying, for a large dipper of water was taken from a nearby pail by the indian and as soon as the bird saw the dipper, it knew what was expected of it and set up a monotonous chatter in English of "Poor Pie, poor pie, Pretty Pie, Pretty Pie " speeding up as the indian came closer.

While there was lots of water in the dipper, the indian would just sprinkle the bird, causing it to chatter wildly, still speaking in English, but when the water got low, it was poured onto the Magpie causing it to set up a volumous stream of Shoshone which caused all the indians within hearing distance to scream with laughter. I asked one old fellow what the bird said and he told me it said "You dirty Pig, stop!" but from the twinkle of their eyes, I felt certain that the bird uttered sharper expostulations than he had interpreted for me.

On the eastern side of the ranch a pair of Sparrow Hawks were seen on the fence and the male was secured! A Prairie Falcon flew past but was just beyond killing range as feathers were cut from him when I fired.

Several Nevada Sage Sparrow were seen on the flat but were exceptionally shy and but one was collected.

The wind again came up about ten o'clock making hunting impossible so we went back to camp.

Three Barn Swallows were seen perched on the fence near the sheep corral and one was collected. While eating lunch an Alaskan Pileolated Warbler was taken from the cottonwood tree overhead.

Again the storm prevented trap setting this evening and we had quite a display of lightning during the twilight hours.

August 29th 1922

The day broke calm and beautiful and Aunt May and Lee got a fine early start hunting.

I went out in the alfalfa fields east of camp to set my gopher traps and while busily engaged one of the Stewart boys came over and began telling me about the squirrels which were now holed up for the winter. He informed me that during May, June and July these animals are simply swarming and that four years ago they nearly ruined the first alfalfa crop. They were so abundant that year he and the indian irrigator drowned 25 out of one hole!

A small lad overhearing the conversation said he had seen a squirrel out yesterday up by the ditch. The accuracy of this statement was doubted but on the chance of finding them we took the Ford and drove up the ditch about a mile, taking some buckets to carry water with.

A careful search followed, over a good area of ground but no squirrels were seen nor could any fresh tracks be found near any of the burrows which were abundant. The recent rain storm had the ground well hardened and tracks would have been very plain had these animals been active.

Returning we stopped near an alfalfa field where they were irrigating as the Stewart boy had said he would show me how to get gophers, trapping was too slow!

He made good his word for we had seven to our credit in an hour of work.

How gophers could survive the flooding I failed to understand as about 400 inches of water was turned in on the small lands, completely covering it for some time. To me, it looked like shiftlessness on the part of the irrigator, that gophers lived in the fields.

Two adult specimens were taken and a nest was found with five tiny young ones with their eyes still closed.

Returning to camp I found the hunters had returned and lunch was ready. They had had fair luck, getting two Western Yellow Throats, two Desert Horned Larks, a Brewers Sparrow, a Wilson Phalarope, an immature Tree Swallow and an immature Bank Swallow.

A large migration of Swallows was in progress and in their midst two White-throated Swifts were seen.

All during the morning the constant rumbling of thunder had been heard in the White Mountains to the westward and many showers had been seen falling among the peaks.

I had barely commenced to skin when a sharp crack of thunder toward the south caused us all to look out and in an instant the game was on. A mighty gust of wind with a cloud of dust & dried leaves was closely followed by a torrential downpour and the storm was upon us. Fortunately we had time enough to get the outside beds under cover and the fly over the big tent before the main downpour came on.

This storm lasted about five minutes, drenching everything but cleared off as swiftly as it had come and soon the sun was shining brightly.

Stepping out of the tent a distant rumbling could be heard which sounded like very distant thunder, tho it was continuous. A cloudburst! and we all hustled about after a coat apiece and off we went in the Ford to find a vantage point where we could see it roll out of the canyon. We were not fortunate in locating it and came back to camp after a brief absence. Hardly had we again settled down to work when a second crack of thunder came from the south. This time the storm was in earnest and started out with a terrific hail storm cutting the leaves from the cotton wood trees like an autumn wind and covering the ground with an inch of white hail stones some of which I measured over 3/4 of an inch in diameter.

This soon passed into rain and Rain it did! The whole country was afloat, for nearly three inches of rain fell in about ten minutes.

And then the Flood - Water - every where - Lee, Aunt May and I dug a good ditch around our camp, banking it up about a foot and that was all that saved us. For an hour water ran ankle deep all over the fields and the irrigating ditches were raging, mountain torrents of muddy water.

Everything on the ranch was in a state of chaos, the pigs were squeaking and everybody was out to see what was going on. I tried to jump a ditch and landed in about two feet of mud and water - on my stomach! and to cap the climax another cloudburst followed. I've always wanted to see one but never had the desire to be in it, but here I was enjoying life in the sunshine one hour and in the next was covered with mud and up to my shoe tops in water.

This last shower added fury to the flood and it swept every thing before it. Aunt May stood guard over our ditch and saved the camp while I tried to make a few pictures!

Needless to say there was no more skinning done! and lucky we were to find enough dry wood to warm ourselves when evening came on.

August 30th 1922

Camp was a mess, everything wet and no place dry, mud on everything. A good wetting doesn't hurt very much but the mud left from a flood is terrible. Fortunately the sun came out warm and with ropes stretched between some fence posts we got our bedding and clothes out to dry.

I was busy after the house cleaning was over, getting up my skins left from yesterday and sent Lee out to hunt up the gopher traps.

He had great difficulty in finding them but after a good search found all ten and they held five gophers, to add to the day's work.

In the evening when he went up to the well for water he saw two large bats flying about and called to me. I took the shot gun and was successful in collecting them both, finding them to be two large dark *Eptesicus*.

August 31st 1922

Several skins had been left from yesterday and Lee had reset two of the gopher traps in fresh holes, which during the night had each captured a gopher.

So I spent the day getting things in order while Aunt May packed a box of skins.

About four o'clock taking the traps we all hopped in the Ford and drove along the foothills to see what damage had been done by the cloudburst.

The ranch had been left waterless as all the head-gates had been swept away and the main ditch filled up with sand.

The effects of the storm was everywhere but oddly enough was limited to the west side of the valley, for when setting my traps in the mouth of Palmetto Wash-Esmeralda Co. Nev. alt. 5500 ft on the eastern side of the valley I found the soil powdery dry and unmarked by rain!

Returning to camp by the short cut the road was found almost impassable by washes and mud.

Sept. 1st 1922

My traps held a bountious catch but nothing out of the ordinary. In fact I failed to remark in yesterday's notes that the association was almost identical to that trapped in on Aug. 24th.

The one unexpected thing that happened worthy of note was the capture of a single *Microdipodops* but on close scouting of the locality I found it was still within its proper bounds. Other animals captured were eight *Perognathus l. bangsi*, seven *Perognathus m. magruderensis*, six *Dipodomys* and four *Dipodomys m. merriami*.



Evidently this latter species is showing up again and offers a problem in association to be solved.

The *Dipodomys* also seem to be peculiar and I would not be surprised to find the *D. columbianus* group represented here.

I set the traps well up in the wash this evening at an altitude of 5700 ft.

This locality marks the last link to the faunal work I had in mind and connects up with the work done 2 miles N.W. of Palmetto - Alt. 5900 ft. on July 7th.

Sept. 2nd 1922

I had set my traps thru a sandy stretch in the valley bottom and then ended the line up over a rocky hill. This last association was typical of the belt which started here and ended at the rocky gorge which was just west of where I had trapped July 7th.

My wash bottom traps held four *Dipodomys*, nine *Perognathus l. bangsi*, one *Perognathus m. magruderensis* and one *Dipodomys m. merriami*. This latter specimen was in a state of lactation.

The traps over the rocky hill held four *Perognathus formosus*, two *Neotoma i. desertorum*, one *Peromyscus c. stephensi* and two young *Peromyscus* that I could not identify with certainty.

Sept. 3rd 1922

I put in the day getting caught up on my notes and I was busily writing in the tent this afternoon I heard a peculiar pecking just outside and on seeking the cause found a hen gobbling up the skulls which I had in a box to dry. She was picking out the small ones swallowing them whole!

The cloudburst of the 29th had entirely inundated this area.

In the afternoon Aunt May went down to the garden for a few vegetables and came back in double haste for a gun - saying she had seen an albino sparrow on the fence.

I soon heard the 410 crack and later Aunt May came in displaying a partly albino Brewer Sparrow.

I set the traps  $\frac{1}{2}$  mile west of the ranch this evening & held little hopes of a large catch.

Sept. 4th 1922

My traps held but eight specimens this morning, two *Omychomys*, two *Dipodomys* and four *Dipodomys m. merriami*.

The latter specimens were rather interesting as they showed what we have always considered mineral or alkali stain and there is absolutely no alkali within several miles of the spot! I am firm in my belief that a great deal of the coloration attributed to various color phases in the summer as mineral stains is in reality of vegetable origin.

I checked over the skulls this morning finding four had disappeared - down the hen's gullet!

We began making preparations to move over to Deep Spring Lake for the gophers this afternoon and found to our disdain that a trip back to Lida was necessary to replenish supplies as nothing could be bought here, so planned to make the trip tomorrow.

Sept. 5th 1922

I drove up to Lida this morning after supplies.

The whole country had changed a great deal since leaving the region on August 12th. The Autumn flowers were out in all their golden glory and the flats all about Palmetto had taken on a most verdant aspect since the rains .

I remarked about it to Mr. Collins and he stated that was of common occurrence and that the country about Jackson Mountain was as green and fresh as a Sierran meadow with succulent grass as high as your shoe tops & that was the very reason this country was so fine for cattle. This seemed odd to me and I immediately pondered over the problems of what bearing it could have on the habits of the animals. I had been told that the "Coobs" sometimes came out again in the fall for a few weeks but this story did not come from a party that I could believe without positive proof.

We were most hospitably treated by the Collins family and had a delicious homecooked dinner with them.

Lee went back to Goldfield today and I was sorry to see him go as he was a good deal of help about camp.

Stopping at Jake Stirer's place on the way back I purchased some of the most beautiful vegetables I had ever seen enough to last some time.

Sept. 6th 1922

Aunt May and I proofread the birds and the rest of the mammals not done so far. I built boxes while she finished packing up the specimens.

Neither of us felt well as we had taken bad colds from the damp ground after the cloudburst and the work dragged terribly.

The packing of the specimens resulted in four boxes full, three of skins and one of skulls which I mailed.

Sept. 7th 1922

We packed the load today preparing for an early start tomorrow morning.

In the early afternoon the Stewart boy brought me a fine Prairie Falcon and a Long-eared Owl and I skinned them later.

Sept. 8th 1922

We made an eight o'clock start this morning and before leaving I ran the Ford with its load onto the big scales. The weight of the machine and load without passengers was 2856 pounds, a most startling burden. No wonder it breaks crankshafts and rips out differential gears.

The roads were very rough and badly cut by the recent cloudburst but not until we reached the main road in the canyon did I realize just what a cloudburst could do!

Where the road was once, there was now nothing but a deep wash from eight to twenty feet deep. The whole canyonbed had been ~~swept~~ swept out and all done in about an hour!

For six miles I ran in low and low low and such a struggle. The soil in places had been taken away leaving nothing but the rough bedrock over which I had to carefully pick the way. High centers were everywhere and several times I thought the heavily loaded car would surely tip over as one side had to be run over a boulder or onto a bank in order to pass some rough high centered place.

It took six and a half hours to make the twenty five miles and after leaving Deep Spring Ranch for the lake I found the whole Wyman creek running down the road so had to take to the sage brushes. The storm had wrecked Deep Spring Ranch also and they could not use their water.

Arriving at the lake we found a place to camp near an old stone corral. This corral was situated on the eastern side of the lake just north of the marshy area. The mountains here rise abruptly from the valley floor, in places almost perpendicular. A scattering growth of Pinyon exists on the summit of this range and the call of Pinyon Jays was plainly audible in the valley.

Water was obtainable a few hundred yards south of

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camp from a spring that gushed out of the very base of the mountain. The day was terribly hot and not a tree for shelter!

I spent the rest of the afternoon fixing up a shelter. A few boards were found nearby and selecting a corner of an old fence I soon had a framework constructed. On top of this brush was piled, making a "ramado".

I set my traps near camp this evening. I am not keen to get an abundance of this material because it is so well represented by last year's work.

Sept. 9th 1922

The night was terribly cold and when I looked at the thermometer this morning I found it registered 42° before sunrise.

The night was weird with coyote howling and I shall get out my traps, working for a bunch of large animals from this region.

During the night rolling rocks were heard on the mountain sides above camp, but despite the full moon which flooded the country with light, nothing could be seen.

My traps held a good catch this morning, eight *Perognathus l. bangsi*, four *Dipodomys*, one *Perognathus formosus*, one *Peromyscus m. sonoriensis* and two *Peromyscus c. stephensi*.

After getting my skins prepared and the torrid sun had sank behind the western mountains, I went out to hunt up gopher holes and set the traps. I found fresh work very scarce, in fact, I do not believe gophers will average one per acre, so in consequence I had a difficult time in getting my ten traps out.

I did not set the mice traps this evening tho half a dozen were set about camp to catch plundering *Peromyscus*.

Sept. 10th 1922

My gopher traps held but a single gopher & as the night was so cold I thought perhaps they were not active so left the traps set within some burrows.

The mice traps about camp held four *Peromyscus m. sonoriensis* of which I saved two.

I looked at the gopher traps several times during the day but caught nothing.

The heat at noontime was almost unbearable and the thermometer read 94°. The reason for this unbearable heat is the humidity about the lake and the fact that no wind can blow down in here. The place resembles a very deep bowl having high mountains all about for edges.

I set my mice traps again near camp this evening.

Sept. 11th 1922

My gopher traps held another specimen this morning and I pulled them all up, resetting them in different holes.

My mouse traps held 7 *Dipodomys* and seven *Peromyscus c. stephensi*.

During the day Aunt May shot a Parkinson Wren and a Woodhouse Jay from the brush near the corral. These were the first and only birds seen about the place so far.

When I was down looking at my gopher traps late this afternoon I heard a swish in the air nearby and quickly looking in that direction I saw a Prairie Falcon catch a Pinyon Jay from the mountainside above.

My gopher traps did better this afternoon and held two specimens.

I set four coyote traps this evening and baited them with mice bodies and the entrails from the two gophers.

A short line of mice traps were set thru the rocks and brush near the base of the mountains back of camp.

Sept. 12th 1922

Out of curiosity I looked at my steel sets this morning and to my surprise found one missing trap, drag and all!

The trail was plain, however, and about two hundred yards away I caught up with the victim, an old female coyote! The first one I had ever trapped myself.

My mice traps held three *Perognathus formosus*, one *Dipodomys*, one *Peromyscus m. sonoriensis* and one *Peromyscus c. stephensi*.

The gopher traps were empty so I reset the whole bunch.

About three-thirty this afternoon I took my clothes down to the bathing pool near the spring, leaving them there while I went out in the marsh to look on my gopher traps before taking my bath. The traps held two specimens and after resetting them I came stumbling over the rough hummocky meadows back to the pool.

A half dozen Pinyon Jays were drinking and at my approach set up a garrolous chatter. I, in return, began to whistle an imitation of their call, walking closer all the time, at a brisk pace. Suddenly, when I was about fifty feet from the pool I heard a tremendous clatter in the rocks and I stopped, startled, for the moment, when to my astonishment, not more than a hundred feet from me stood a large ram mountain sheep with a ewe close beside him.

I had disturbed them from their drinking. Stealthily backtracking without making any quick motions, I returned to camp. When near enough I called to Aunt May, who quickly came on.

We carefully approached the spring and sat down within fifty feet of it.

The two sheep had moved to the top of a small cliff nearby but even then were within 150 ft. of us. They did not act very timorous but kept watching up the mountainside, finally following their gaze, several more ewes & lambs were seen coming down the rocky slope, five in one bunch moved rather slowly and extremely cautious but five others which were struggling up the slope came jumping and bounding over the rocks as the notion seized them, stopping at intervals to climb up on a higher rock for a "look about", uttering a ba-a-a like other domestic sheep but which did not sound very much like them. This call seemed to be used when the bunch was scattered and I was surprised at how noisy they were!

Just as the bunch of 12 were well assembled and the ram had descended to the spring to drink - for indeed he was their leader, a fool woman on horseback came galloping up towards the pool stopping about a hundred yards away out on the meadow, when she sighted Aunt May and I sitting quietly near the spring.

This was too much for the sheep and they bolted up the mountain side, the pounding of their hoofs and the rolling rock sounded like an avalanche but going uphill instead of down! How pretty they looked their white rumps bobbing up and down as they scaled the steep incline in single file, on a swift run!

I've always contended that the world sheltered many fools and my thoughts were anything but complimentary of this blundering female, who turned her horse's head and rode back as fast as she had come, without saying a word - and no doubt without even guessing what a sight she had missed. However, the sheep only went a hundred yards up the slope and stopped on the top of a small cliff. After a brief pause the old ram again came down to drink but knowing of our presence did not come to the spring nearest us, but one a hundred feet farther south. Gee, how I blessed that woman for had she not appeared at the critical moment all twelve of the sheep would have been within seventy feet of us.

Following the ram six of the ewes and two lambs came down to drink, and a beautiful sight they were in the little green meadow.

As we were enjoying the sight, I chanced to glance towards the sky line and there, standing on a large rock in bold relief, stood another sheep with seven more that we could count scattered about on the mountain side close by. They were too far away to tell ram from ewe but counting the white rump patches which were easily

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seen we were certain of the count, tho I am sure there were more of them that could not be distinguished.

We watched the sheep for an hour and a half and after they had drunk their fill, they started slowly browsing back towards the mountain crest, all the way up the mountain the old ram was continually in the lead, mounting the tops of large boulders, just like a watchful Valley Quail, ~~guarding~~ guarding his flock from danger.

They were still feeding on the mountain side, within sight, until it became too dark to see them any longer. And that was, indeed, the end of a Perfect day.

I happened to glance at my nearest coyote set at noon and found the *Amospumophilus* were carrying away all the bait so I set a rat trap near by and this evening it held a specimen. I set several rat traps about the stone corral for wood rats this evening wishing to determine the species inhabiting these parts.

Sept. 13th 1922

My coyote traps were empty this morning and my rat traps held a fine adult male *Neotoma i. desertorum*. The gopher traps were empty so I hunted about searching for new holes. This proved a hard task but after a good deal of digging I found enough holes to set all the traps in.

While I was skinning my Woodrat this morning, Aunt May, out by the store, chanced to hear rocks rolling, and began to scan the mountain side above for the cause. She soon located it in the shape of a huge ram about 300 yards above camp and a big one he was! All by himself wandering about. He had probably grown too old to hold his own in the band and had been driven out by the younger rams. He still possessed the desire of leadership, however, for every large boulder he came to he would jump to the top of it for a "look about" before going on. On one large rock on the face of the mountain he lingered about five minutes. What a picture he would have made in that still position looking first one direction and then the other. He finally wandered on and was last seen, picking his way up thru a precipitous canyon.

I looked over my gopher traps after lunch and found a single specimen had been taken.

And again at sunset I took another gopher from the traps.

Several bats were flying about camp and I shot two - one was a *Myotis*, but so badly shot up that I did not save it! Another was a *Pyristrellus* and was saved.

Sept 14th 1922

Today was a repetition of yesterday as far as gophers were concerned. I spent a good deal of my time digging for new sets but the result for my labor was small and only two specimens were taken during the day.

When looking at the traps in the evening I chanced to find a small colony near the lake and moved all my traps into it.

Another Ammospermophilus was taken near the coyote sets today.

Sept 15th 1922

Another coyote was taken this morning. This time it had taken trap, drag and all out on to the meadow and was not found for about half an hour and then only because another coyote was seen running towards the brush away from it. This must have been her mate as it was a huge fellow with a fine large tail.

My gopher traps held five gophers and I was well pleased. This evening I searched about for another place similar to the last but was unable to find it. Apparently the gophers are restricted here to the immediate vicinity of the fresh water rills which flow from the springs near the base of the mountains for I made a general survey of the ground north along the lake and did not see even an old burrow. I set my traps in some old holes in hopes of catching more male gophers.

Sept 16th 1922

My traps held a single specimen and I put in a couple of hours digging out old holes trying to locate good sites this morning.

Having no fresh bait for my coyote traps, I went hunting about 4 this afternoon with the intention of shooting two or three jack rabbits.

I skirted the lake for nearly two miles not finding a thing and by the chance of good fortune when returning to camp after the sun had set, I pumped a lone Jack. The rabbit acted queerly when running and I found out the reason when chopping it up. The whole insides of the animal was filled with tumors which resembled bunches of grapes. The sight made me gag and I could hardly eat my evening meal when thinking about it.

My gopher traps ever empty and I could find but two holes that looked as if they were inhabited.



Sept 17th 1922

Both the coyote and the gopher traps were empty this morning so I reset the gopher traps in more old holes.

I spent the day checking over notes and preparing to leave in the morning for Dyer, Esmeralda Co. Nev. my next collecting station.

This morning at day break I heard the mountain sheep ba-a-a-ing in the canyon above camp and for an hour after sunrise, rocks were heard rolling down the precipitous mountain sides. I presume they were on this side of the range to visit the spring again but a constant watch was kept all day without seeing a sheep near the spring.

Sept 18th 1922

On the move again this morning and near the base of the grade leading north out of Deep Spring Valley one cylinder of the Ford went dead and I lost over two hours finding and repairing the trouble which was faulty coil point this time.

After getting the accumulated mail at Oasis we started north down Fish Lake Valley.

The cloud burst of Aug. 29th had scored heavily along this part of the valley for a distance of about seven miles north of Oasis and already the watered area had taken on an unexpected verdancy.

After passing the area that had been inundated by the storm, some interesting country was seen. Here I found large tracts that were favorable for Microdipodops and closely resembled the country I had worked south of Oasis.

The associations were very plain here but instead of being spotty, as I had found them to the southward, they ran parallel with the length of the valley until elevation or soil conditions eliminated them entirely.

This seemed to be the case with the Microdipodops' ground, for about a mile south of the Young ranch this association gave place to one of tall thorny bushes with thick juice leaves some of which were six feet tall. Perched on top of one of these bushes I saw a Ferruginous Roughleg about two hundred yards from the road. I took a "pop" at him with the rifle but of course, missed.

This area during the early summer is simply swarming with "Coobs" and the ranchers tell me they are quite problematical to control at times.

This last\*association was worked at Oasis and I found the first new one at Dyer just where I had planned to stop!

\* mentioned

This area looked very much like that above the Pellisin Ranch in Mono Co. where I put in several weeks last year and seemed to be of the same conglomerate nature, having several species of thorny bush with a good mixture of sage growing in the sandy alluvium.

Farther to the westward up the detrial slope, which reached to the base of the White Mountain, are associations of very short, stunted brush, some cactus and other plants was growing in very rocky soil. This offered another possibility in animal inhabitation to the valley and I am anxious to string out my traps up that slope.

On the eastern side of the ranch the ground appeared to be of a sulferous nature but I have not yet had the opportunity of examining it carefully.

The delay with the Ford and the hour or so spent at Oasis had greatly detained me, and in consequence, camp was not reached until late. As the last mile of the sandy road was encountered the "Hand cranked Rattle Box" busted his fan belt and I let it stay "busted" until a camp site was found. Camp was established near a rushing mountain stream that waters the Molinis Ranch. How good it was to taste snow water again and despite the fast coming darkness I drank my fill.

The traps were set out by lantern light thru the brush near camp. This was the heavy growth which resembled Pellisin's Ranch.

Sept 19th 1922

Just as I was pulling on my shoes at daybreak I heard a rustle in the cottonwood tree overhead and picking up my gun, which is always handy, I axed an immature Cooper Hawk from his perch in the tree.

My traps held a splendid catch nine *Peromyscus m. sonoriensis*, three *Omychomys*, 13 *Dipodomys*, two *Dipodomys o. monoensis*, four *Diposomys m. merriami* and an unidentified *Peromyscus*. The traps also held part of the tail of an *Perognathus l. bangsi*. These animals should be abundant here but I think these are just about dormant for the winter tho a few might yet be taken.

After getting up my skins this afternoon I put out one coyote set a few rods from camp, using my skinned animals and the Cooper Hawk for bait.

Traps were again set this evening thru the same association as last night tho in one place I ran about twenty into the area where this lower high brush association converged into the scrubby brush slope association.

Sept 20th 1922

My coyote set was untouched and the micetraps held a splendid catch five *Dipodomys m. merriami*, two *Dipodomys* three *Peromyscus m. sonoriensis*, six *Omychomys* and seven *Perognathus l. bangsi*. The latter specimen and one *Omychomys* were taken in the scrubby brush association. This evening I set my traps in a locality about half a mile south of camp and about half a mile west of Dyer. The place appeared propitious tho not abundantly, for very few annual plants were seen.

While I was away a Horned Owl lit on a bush near camp and Aunt May tried to get close enough to shoot it but could not.

After getting up my skins this afternoon I went over to an indian camp near by to see what kinds of pets they had, for I had seen a couple of bird cages hanging up when I came in the other evening.

One family had an immature male Nevada Red-wing and an immature sage Thrasher and another family had two immature Mocking Birds still in post juvenal plumage and with half grown tails! They could have only been hatched but a few weeks ago.

Sept 21st 1922

I forgot to put the accumulated bait on the coyote set last night and this morning I found the tracks of a coyote all around my traps, where it had been sniffing at the decaying Cooper Hawk. The pocket rats seem to fancy the dried up carcasses of the mice and carry them off and but few had been left to attract the varmints.

My mice traps held a rather short catch this morning but as I had foreseen, four *Microdipodops* were taken. I had started my line where the heavy brush began to converge with the *Microdipodops*' habitat and in this part of the line I took one each of the following species: *Peromyscus m. sonoriensis*, *Perognathus l. bangsi*, *Dipodomys m. merriami*, *Dipodomys o. monoensis* and *Omychomys*.

Today about noon Aunt May saw a *Sphyrapicus* in a willow near the creek, calling to me I came on with a gun and collected it, finding it to be a fine adult ♀ *s. v. newchalis* in fresh full plumage. Only a few secondary wing feathers remained to be shed.

I set my traps well out in the *Microdipodops* area this evening and gave the coyote set a double dose of bait.

Sept 22nd 1922

The coyote set was empty and the mice trap held only a fair catch, six Microdipodops, one Perognathus l. bangsi, one Onychomys, two Dipodomys and two Dipodomys m. merriami.

During the day a Spotted Towhee was heard in a willow clump near the stream and was collected.

I set my traps up thru the scrubby bush area on the detrial slope. On close scrutiny the place did not look very abundantly inhabited, but I strung out all my traps nevertheless.

A new Woodrat's nest was found built about an old claim monument and when a rock or two was rolled off I saw a Woodrat run into a crevice. Carefully removing the stones I captured an adult female Neotoma i. desertorum.

Sept 23rd 1922

My steel set held a small male badger this morning and he had torn up the ground all around so bad that after killing the animal I pulled up the sets as they were now worthless.

My mice traps held a poor catch, one Neotoma i. desertorum, one Peromyscus m. sonoriensis and three Peromyscus whose identity I was uncertain.

I set all my gopher traps in the nearby alfalfa fields this morning and upon inspecting them about three p.m. found two large male gophers and a female taken.

While I was resetting the traps a Horned Owl was flushed from a Box Elder tree near the irrigating ditch and flew to another perch farther down the row of trees. I turned back to camp, which was only a short distance away, for my gun, returning with Aunt May to help in the conquest. Each of us taking a side on the row of trees, we moved down cautiously, peering into every tree. Suddenly, the owl flushed from Aunt May's side of the trees and flew over to my side where I finished him.

No more traps were set this evening because tomorrow is moving day, tho all the gopher traps were left out.

Sept 24th 1922

This morning my gopher traps held two more large, adult gophers and I reset the traps, planning to pick them up just before leaving. After picking all the gopher skins we commenced packing up and by one o'clock were ready to leave .

My gopher traps held but one more specimen which I viscerated and carried along.

I had learned a few weeks ago that the cloud burst of August 29th had passed thru Saline Valley, tearing out the road. This made my visit to the place impossible so plans were changed and the northern end of Fish Lake Valley was worked instead.

Having completed this work it was decided to continue on around the northern end of the White Mountains stopping at the Faylor Ranch - 2 miles south of Benton Station, to collect a small series of Microdipodops polianotos in fall pelage.

After leaving Dyer the road continued north for several miles passing thru an area of heavy sand. This association appeared almost identical to some of those already worked.

After crossing Chiatovich Creek the road began to gradually ascend a long incline and after several miles of sandy rocky going it skirted lava covered hills where the road bed was full of very sharp rocks. Very little growth was seen on these lava hills and in this part of the valley the only vegetation was that along the washes.

The afternoon was almost breathless and the poor old Ford boiled and boiled as it struggled with the climb.

Reaching Sand Spring I opened the pit cock on the radiator and replaced the boiling water with cold.

At this place a tiny stream of cold mineralized water issued from a fissure in the bed rock, well away from the hills. No perennial vegetation was growing here and the water was used by some enterprising indian to grow his winter supply of potatoes tho the owner had only planted the garden in the summer and left it to live or die, while he was away.

After leaving Sand Spring the road ran up a wash. Such a road! Narrow places, wide places, bed rock and boulders. Up and up the boiling Ford struggled. The place seemed destitute of growth and the reflected heat in the close canyon made the trip anything but pleasant.

The end of the canyon was finally reached and the route was then over many miles of rolling sage covered hills.

The Pinyon belt was but a five hundred yards above on the higher hills towards the south. The high peaks towered beyond and on this a few banks of snow remained out of reach of the sun's rays, in deep canyons.

The first habitation of man was reached at the Rail Road Station of Basalt and from there on the road followed the course of the train tracks.

This country was Lava-Sage association tho the road

was so rough that I was too well occupied with the driving to see much of it. The most impressive feature, however, was the number of times the highway crossed the railroad, seven times, if I remember right, within a single mile and not an approach to either rail to ease the loaded cart.

After reaching the Pinyon belt the road was better and I had a chance to look about between turns tho it still climbed upward with a steady grade.

Rounding a turn, just before reaching the railroad station of Mt. Montgomery at the summit of the pass a most magnificent alpine view was seen.

Towering towards the dark blue sky, Mount Montgomery and Boundry Peak stood boldly in the background, their summits well over 1300 ft. while the rising hills, which bounded them at the north, were densely covered with Pinyon pines. The dark green of the pines, in contrast with the white lime, poffery and pumice of the peaks, made a scene too beautiful for words!

The altitude of the pass was 7126 ft and here the first migrant birds were seen, when a dozen Gambel Sparrows flew across the road. The road descended from the summit thru a very steep narrow canyon and I was thankful to be going down instead of up. In this canyon several gaudy Mountain Bluebirds were seen in brilliant fresh plumage.

Reaching the bottom of the grade, I was again in Owens' Valley and after an hour of steady travel I passed the old collecting station of Pellisir Ranch and speeded on towards Benton Station, where I arrived just as the sun sank behind the High Sierras to the westward. Arriving at the Taylor ranch, two miles farther south, Aunt May and I were most hospitably welcomed and we again sought shelter at our old camp site near the alfalfa fields.

The place had been used recently by an indian family, a member of which was very ill and Mr. Taylor had burned over a good portion of it for sanitary reasons, so it was hardly suitable. However, we pitched a temporary camp nearby, intending to find better quarters in the morning.

Just after dark a most hideous yelling started up from the north side of the ranch, where the indians had moved, and Mr. Taylor informed us that it was the Indian Medicine Man who had recently arrived to care for the sick man.

This infernal yelping was kept up all the night long and it not only kept away the Evil Spirit, but murdered perfectly good sleep.

September 25th 1922

Camp was certainly moved before breakfast this morning and a location was chosen at the greatest distance from the indian camp, that shade could be found.

I spent the morning getting camp set up and skinnin the gopher and Horned Owl left over from yesterday.

In the afternoon Aunt May and I proofread the specimens so they could be packed and shipped.

Traps were set thru the brush east of camp this evening in the same locality I had trapped in during July 1921.

While setting them I saw an adult *Eutamias pictus* running in the brush. This locality is rather low in elevation for this chipmunk and I was surprised to find it here.

The association seemed conglomerate with a great abundance of sage and indeed, very different from the habitat of the *Microdipodops* in Fish Lake Valley.

The Infernal racket was started up again tonight just as the moon set about 9 p.m. and continued until sunrise. The pow-wow could not be heard so plainly in this camp but the wildest part was loud enough to startle the most sound sleeper and many times I was awakened by the hideous shrieks! I can assure anyone who has never heard the Medicine Man's chanting that the Evil Spirit or any other spirit in flesh or invisible would never venture within hearing and it takes a great racket to keep my eyes open all night!

Sept 26th 1922

My traps held a good number of specimens but only four that I saved - ten *Peromyscus m. sonoriensis*, two *Perognathus p. olivarius*, two *Microdipodops palionatus* and two *Dipodomys leucogemys*.

The ten *Peromyscus* were used for coyote sets and one each of the *Microdipodops* and *Perognathus* had been partly eaten by other mice.

Just as I got out of my bed this morning at day break, I saw a sharp-skinned Hawk with something in its talons on the ground near Taylor's chicken house.

Quickly picking up my gun I shot the hawk and found a young dove clutched tightly in its claws.

-- continued on second page of notebook headed

"Notes Lone Pine to Finnis (sic)  
1922"

Note

Lone Pine

to

Finnis

1922

This pen is an easy writer it flows so well  
that I find it unnecessary to bear down.



Death Valley -

Neotoma i. desertorum - merriam  
T. L. Furnace Creek - Death Valley  
Inyo Co., Calif.

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Perognathus p. stephensi - merriam  
T. L. Mesquite Valley - n.w. arm Death Valley

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Citellus T. eremnomus - Elliot  
T. L. Furnace Creek, Death Valley.

Panamint Mts.

Thomomys scapterus - Elliot  
T. L. Hanopu Canyon, Panamint Mts. Inyo Co. Calif.

Perognathus l. panamintinus - Merriam  
T. L. Perognathus Flat= Harrisburg Flats -  
Panamint Mts. - Inyo Co., Calif. alt. 5200

Dipodomys panamintinus (Merriam)  
Panamint Mts. - Johnson Inyo Co. =  
Hungry Bill's Canyon

Eutamias panamintinus (Merriam)  
T. L. Panamint Mts. - below creek

Dipodomys ~~levis~~ <sup>levis</sup> (Merriami)  
T. L. Perognathus Flat

... shot the hawk and found a young dove clutched tightly in its claws.

While I was skinning my specimens this morning a second sharp-skinned hawk was seen as it alighted on a limb of a willow tree not far away. Picking up my gun I shot where I thought the hawk had perched but missed the mark. The report of the gun frightened several doves from the same row of trees and as the hawk flushed it seized one and my next barrel killed both the hawk and dove.

Strange tricks destiny plays on all things in nature. The Hawks had caught the doves for their own stomachs and in the end I had doves for my dinner, at the hawks' expense!

I set my ~~knaps~~ mole traps this afternoon in a runway near the edge of the alfalfa fields.

The mice traps were strung out in the same locality again.

September 27th 1922

The Medicine Man was quiet last night and I was informed by Mr. Taylor that instead of caring for the sick he had reverted to gambling which resulted in a peaceful night's rest for the neighborhood!

A great chorus of coyotes was heard at daybreak and I shall surely set my traps today as I now have a fair supply of bait.

My traps held a fair catch this morning - three *Microdipodops polionotus*, one *Perognathus p. olivarius*, five *Dipodomys buncogenys*, one *Eutamias pictus* and seven *Peromyscus* were all used to bait my coyote traps.

The chipmunk was a very early riser, for tho he was yet warm when taken from the trap, I had my traps all in by six-fifteen and the sun was then just tinging the crests of the western mountains.

During the past two nights trapping no *Perognathus l. bangsi* have been taken, and they were very abundant here in July 1921, so their winter hibernation must have commenced.

However, the mornings have been very crimpy, yesterday morning at five-forty-five, the thermometer registered 34° and this morning at about the same time the instrument registered a shade higher than 32°, tho no ice was found on the water bucket.

A small bunch of Gambel Sparrows were seen in the willows near camp this morning.

The coyote traps were set this afternoon and this evening I set the mice traps thru the same general locality as I had trapped in during previous nights.

September 28th 1922

There was no racket from the Indian camp last night, for the Medicine Man had given up the case and departed north on yesterday's train, but to add to the variety of the season's adventures, two mad bulls chose the camp-site for a battle ground, bellowing, paving the dust into the air, breaking down fences and chasing each other around at a furious rate. The climax was reached when the largest one began to nose about the tents, stumbling over the guy ropes. I then picked up the shot gun in case they took after me, opened the gate and drove them out, giving them a good pelting with large stones as they went.

They were still at it this morning and Mr. Taylor gave them each several charges of light shot as they ran directly away from him!

My traps held a splendid catch, thirteen *Peromyscus m. sonoriensis*, six *Dipodomys Leucogemys*, three *Microdipodops pallionotus*, three *Perognathus p. olivarens*, and a single *Perognathus l. bangsi*.

The latter specimen was a surprise and I believe the reason for his being out was the fact that the night was much warmer than the two past.

Only one of the *Peromyscus m. sonoriensis* was saved and it was a beautiful buff colored specimen which closely resembled some of Dr. Summer's domesticated ones.

My coyote traps were untouched tho a great portion of the bait had been taken from one set by *Dipodomys*.

The mole trap was sprung this morning but did not catch the mole for it had burrowed below the reach of the trap's jaws. I reset it in the same runway and trust for better success the next time the animal comes past.

Mice traps were set again in the *Microdipodops* area.

Sept. 29th 1922

My coyote traps were untouched and the mice traps held a short catch, eight *Peromyscus m. sonoriensis*, three *Microdipodops palionotus*, one *Perognathus p. olivarius* and one *Eutamias pictus*.

The latter was still kicking when picked up, but indeed, an early rising Chipmunk!

The mole trap was unsprung. I looked about and could find no better place to set it, so left the trap where it was.

One strange thing that I cannot account for, is the entire lack of *Omychomys* in my catches. When I was here last year this species was not uncommon.

After lunch I drove over to Benton Station for supplies.

Mice traps were set as usual for *Microdipodops* this evening.

Sept. 30th 1922

My catch was almost a failure this morning as only one each of *Microdipodops palionots*, *Perognathus p. olivarius* and *Peromyscus m. sonoriensis* was taken.

The mole had again undermined the trap so I devised a plan to fool him. I secured a bucket of water and poured it around the set, stirring all the loose soil into soft mud and then set the trap again in the line of the runway.

After checking over my notes I set a half dozen gopher traps in the fields. Very little fresh work could be found and some old holes were used.

I strung out the mice traps on the north side of the ranch this evening. The soil was arenaceous in character and the chief vegetation was sage brush tho a small variety of other plants were observed.

October 1st 1922

My mice traps held nine *Peromyscus m. sonoriensis* and seven *Microdipodops palionotus* this morning and one of my coyote sets was missing, trap, drag and all.

Close scrutiny of the set revealed the fact that the coyote was caught by one hind leg and had been trapped while trying to scratch dust over a newly deposited pile of dung. The sudden grip of biting steel had sent him about eight feet away in a single bound! And how he did travel then! Aunt May and I were

nearly two hours tracking him down and then when finally cornered the animal made off across the alfalfa fields at a terrific pace, hotly pursued by me. He succeeded in getting into the thick brush again but was caught after an exciting dash. The coyote was a fair sized male in good pelage.

I was so busy all day that I couldn't find time to look at the gopher traps until evening and then but one specimen was taken.

My mole set was successful this evening and a nice topotype male *Scapanus l. monoensis* was taken.

The sky was heavily overcast with steel gray clouds which promised either wind or rain so no more traps were set.

However I did put the coyote traps back again in hopes another coyote would get caught.

October 2nd 1922

During the night a most violent wind came up bringing intermittent showers of rain.

My coyote traps were untouched and no tracks were seen near them.

The wind was so strong all day that nothing could be done and only thru the kindness of the Taylors was any hot food available.

Towards evening we did get a few things packed preparatory to moving tomorrow.

October 3rd 1922

We made a good early start, before the wind commenced to blow hard.

Near Hammel Station, a coyote ran across the road, just a few rods ahead of the Ford and stopped on the brow of the hill about a hundred yards away. I slowed up the machine, drew the carbine quickly from its scabbard and as the machine stopped, I fired, hitting the coyote low in the chest. The bullet tore a ghastly wound and the animal succumbed in a few moments. The impact of the bullet turned the beast feet up instantly and I could scarcely restrain a laugh as the kicking feet seem to take the place of the saggy body like a "Jack in the Box".

I fortunately had an empty barley sack and the coyote was wrapped in it and tied on the running board.

Bishop was reached about lunch time and I put the Ford in the shop for a few necessary repairs.

Two boxes of specimens were shipped to Pasadena by express and a few things were purchased.

Leaving Bishop about 3:30 p.m. everything went well in spite of the very rough road, until Independence was reached, and there, while hunting for a place to dine I chanced to turn around in the middle of the block and was nabbed by an officious deputy sheriff. While the assessment was light the delay was considerable and I did not get away from that one man town until nearly eight o'clock, arriving at Lone Pine about 9:30, making a temporary camp for the night on the outskirts of the village.

Oct. 4th 1922

As soon as breakfast was over this morning I prepared to skin my coyote but found it to be an unwholesome stinking mess and I had to abandon the operation.

Camp was established near the diverting dam again and I set my mole trap in a fresh runway.

I set my traps one and one quarter miles north east of Lone Pine this evening, choosing the first associational change east of the village. The line ran thru the cementery.

Oct 5th 1922

The mole had tunneled around the trap so I moved it over the newly made runway.

The mice traps held three *Dipodomys*, one *Dipodomys m. merriami* and one *Perognathus l. bangsi*.

The latter specimen was the best of the lot, not from a standpoint of rarity, but, that it seemed to be possibly the last of this species that will be taken this season. It also showed that the period of hibernating starts at this altitude at nearly the same time it does higher up, as at Benton.

Birds seemed very scarce here this year and the migrations have either passed or not yet arrived. A Woodhouse Jay was collected near camp this afternoon and was the only bird of interest seen.

Not being satisfied with last night's catch I again set thru the same locality.

Late this evening I was pleased with the capture of a mole.

October 6th 1922

My catch was a repetition of yesterday - three *Dipodomys* and two *Dipodomys m. merriami*.

We went hunting up the creek this morning but found no birds other than the two collected. One Water Ouzel and a Blue-fronted Jay.

Later in the afternoon a Woodhouse Jay was shot near camp.

I set my traps two miles north east of Lone Pine this evening on the eastern side of Owens River. The brush was the same variety as was growing on the west side of the river but a little thicker tho the soil seemed more arenaceous and much better for *Dipodomys*.

I have been expecting to find *Dipodomys deserti* in this region but the ground is not as sandy as they like.

The mole trap borrowed from Howell arrived this morning and I set them out with great hopes.

October 7th 1922

My traps held four *Dipodomys* and fourteen *Dipodomys m. merriami*. I saved only ten of the latter and one of them was especially interesting, having an almost white tail and the bottoms of its hind feet were pure white.

My mole traps were undisturbed this morning and I looked at them many times during the day with no results.

I set my traps on the eastern side of the valley this evening at a place to be known as 4 miles N.E. of Lone Pine alt. 3800.

The association here was much different from that of the sandy valley floor, The steep detrial slope from the adjacent mountains was extremely rocky, and besides the scanty growth of thorny bushes, a few cholla cactus and scrubby creosote bushes were found.

In fact, it was typical country for such mammals as *Neotoma i. desertorum*, *Perognathus formosus* and *Peromyscus c. stephensi*.

On my way across the valley I saw numbers of small Playas. One in particular had an area of about 10 acres and was elliptical in shape. This was used as a racetrack by the Speed Demons of Lone Pine and a fine hard track it was.

October 8th 1922

A violent wind started up before dawn this morning and when going after my traps I was nearly blinded by sand as I passed thru the sandy area.

My traps held a fine catch, three *Perognathus formosus*, seventeen *Peromyscus stephensi*, eight *Dipodomys m. merriami* and three *Dipodomys*. The latter three specimens were taken when my line verged on the Valley floor association.

I had a terrible time getting my skins up today and only succeeded in completing the work by getting into the center of a dense birch thicket out of the wind and dust.

My mole traps still seem to be undisturbed and I do not seem to be able to find any mole activity to give me hopes.

The wind was still ripping this morning so no traps could be set.

Oct 9th 1922

The violent wind raged all thru the night making sleep impossible for me.

My mole traps were empty so I determined to try drowning them out and spent half the morning cutting off weed from the inhabited areas and pouring water into ~~the~~ thru holes. The result was a failure and I neither caught a mole nor discovered anything unusual about the beasts.

I tried to hunt this morning but the wind made it impossible to hear anything so gave it up.

October 10th 1922

The stirring up I gave the mole colony did some good for this morning one of my traps held a fine specimen.

The wind had subsided during the night so I went hunting up the creek this morning. I found birds were scarce and killed only two specimens, a Canyon Wren and a Hermit Thrush. Several small flocks of Gambel Sparrows were seen.

I was delighted this afternoon to find another mole in my traps. Surely the Hoodoo has passed and I will now catch a good series.

October 11th 1922

The morning mail brought a request from Van for a series of Valley Quail from this region so after an early lunch I set out for Owens River where I was informed these birds were plentiful.

I followed the stream about three miles, struggling thru dense willow thickets and over large patches of high sunflower\*with the result of nothing gained. A small covey of Quail was flushed but I did not see one of the birds as I was in the middle of a willow thicket nor could I find them again when they rose.

\* that were full of shattering fine chaff



October 12th 1922

I again tried the river bottom this time choosing a different section.

I found migrant birds abundant, large flocks of Gambel Sparrows and many Red-shafted Flickers were seen. In the Tule patches I found song Sparrows were thick and saw several Marsh Wrens.

I collected two Song Sparrows and one Marsh Wren.

My fortune as a Quail hunter remained as of yesterday. I found the tracks of two very large bunches but saw not a bird. I finally gave it up, when I was chased out of the river bottom by a very ferocious bull.

Imagine my surprise when arriving in camp, tired and out with the world, to find Aunt May with ten fine Quail, an unidentified Warbler and a Varied Thrush! That's what I call Beat at your own Game! and the big covey of Quail had come right into camp when Aunt May was laying too sick to get up.

I spent the afternoon getting up the small birds and the skins off the Quail so the meat could be saved.

October 13th 1922

I was busy most of the day getting up the Quail taken yesterday. While I was at work a large band of Lead-colored Bushtits came thru camp and Aunt May shot five of them.

My mole traps still seem Hoodooed so I moved them this afternoon.

While eating lunch today a beautiful male Pheasant came walking into camp but neither of us were able to get a shot. A sharp-skinned Hawk was shot near camp this evening.

Oct. 14th 1922

We proof read all specimens to date and made boxes and packed all the dry skins ready for shipment.

We began to break camp this afternoon preparing to move to Walker Pass tomorrow.

Oct 15th 1922

I was awakened at daybreak this morning by the call of a Quail and upon cautiously peering around I saw a small covey almost in camp. Picking up my gun which I always have handy at night killed four with one shot of the 38 aux.

After getting up the four Quail I started to load the Ford. Everything went wrong, the bottom came off the ammunition box and my sack of dust shot spilled all over the ground. This accident caused a long delay and the separating of the sand from the fine shot proved anything but easy.

The departure from Lone Pine was not made until almost noon and then the rough roads made travel extremely slow.

Nothing of interest was seen until a point about three and a half miles north of Indian Wells was reached. Here Aunt May spied a *Dipodomys deserti* hopping about in broad daylight. In fact I looked at my watch and it was exactly 4:17 p.m. with the sun shining brightly.

Both of us piled out of the Ford and after a lively chase captured the animal.

Driving on we made a dry camp well up in Freeman Canyon, almost at the summit of Walker Pass, just after sunset.

A heavy forest of Tree Yuccas was growing on the warm exposed slopes while the crests and north slopes of the surrounding mountains were heavily clotted in Pinyon.

The traps were set near camp by lantern light.

October 16th 1922

My traps held a fine catch including one of the desired topotype *Perognathus xanthonotus*, other things taken were three *Peromyscus m. sonoriensis*, three *Oryzomys*, three *Peromyscus truei truei*, six *Dipodomys mohavensis*, and two unidentified *Dipodomys*.

Aunt May killed a Nevada Red-winged Blackbird and a Cactus Wren near camp. The Blackbird was very much out of place and on skinning it, the bird was found to have recently suffered a broken wing and was probably in a weak condition, hence its stopover here.

I set my coyote traps nearby using the rat carcasses for bait.

Traps were again set nearby this evening.

October 17th 1922

My traps held a surprise this morning when two *Perognathus l. bangsi* were in the catch. Other things were one *Perognathus xanthonotus*, one *Peromyscus truei truei*, three *Peromyscus m. sonoriensis*, three *Oryzomys*, two *Dipodomys mohavensis* and five unidentified *Dipodomys*.

I was awakened at daybreak this morning by a peculiar bird call and sitting up in my bed I saw a Red-breasted Nuthatch going up a Yucca tree in camp.

It flew to a Yucca nearby and I shot at it but missed.

The mice traps were again set out near camp this evening.

October 18th 1922

I had my traps picked up at sunrise this morning and they held an abundant catch, tho little did I realize what proportions the day's work would assume when the coyote traps were examined.

My mice traps held two *Perognathus l. bangsi*, one *Perognathus xanthonotus*, six *Peromyscus truei truei*, four *Peromyscus m. sonoriensis*, four *Dipodomys mohavensis*, four *Dipodomys* and one *Omychomys*.

The *Omychomys* proved an unusual specimen for the trap had smashed him on the nose, shattering the bones but not killing the animal. Apparently it had drawn in its breath thru the mouth and discharged it thru the nostrils into the shattered nasals and under the skin for it was puffed up to about two and a half inches in diameter, all the skin being inflated except around the eyes and a narrow strip under the belly - a comical sight!

Upon inspecting the steel traps I found one missing, drag and all so called Aunt May and we tracked the beast down.

After about four hundred yards of trailing we found a mad male coyote, tangled up in a clump of small Yuccas and with the aid of a tent pole I dismissed him tho he died, fighting to the very end.

My mice traps were set as usual near camp this evening.

October 19th 1922

My traps held a good catch this morning and my luck took a turn for the better as two of the desired *Perognathus xanthonotus* were taken. Other specimens were four *Peromyscus t. truei*, four *Peromyscus m. sonoriensis*, one *Perognathus l. bangsi*, one *Omychomys*, three *Dipodomys* and one *Dipodomys m. merriami*.

The latter specimen is the only one of the species taken so far at this locality but unfortunately it was trapped in a small trap & has a broken skull.

A great deal of difficulty has been experienced with these new traps as they are too small for large animals and too strong for real small animals.

Keeping bait on the coyote traps is also problematical as a pair of sly thieving ravens clean up the set each day without getting caught and are too shy to shoot.

The inconveniences of a dry camp are many but water hauling is the worst time killer of all and as the small supply of water was exhausted I had to Ford it about four miles down the canyon to a settler's cabin for a fresh supply which was full of silt & alkali and none too palatable, after using the fine soft mountain water at Lone Pine.

The small traps were set again over the hills near camp.

October 20th 1922

My traps held another fair catch this morning tho a prowling wild cat made off with three of my large traps and their contents.

The catch consisted of one *Perognathus xanthonotus*, two *Perognathus l. bangsi*, four *Peromyscus m. sonoriensis*, five *Peromyscus truei truei*, two *Oryzomys* and six *Dipodomys*. Four of the latter were caught in the small traps & had broken skulls so were not saved.

The bait was again taken from my steel set by the thieving ravens and they seem to now be daily callers!

The traps were again set out for *Perognathus xanthonotus* this evening. I seem to average but one each night & I believe the cool weather to be responsible for their inactivity, for surely, with nearly a hundred traps out, the daily catch on a midsummer's night would average more than one!

October 21st 1922

My traps held only a moderate catch this morning, one *Perognathus xanthonotus*, one *Perognathus l. bangsi*, one *Peromyscus m. sonoriensis*, one *Oryzomys*, three *Peromyscus truei truei* and three *Dipodomys*. During the past few nights mice had been bothering the food in the grub boxes one of which was on the ground and the other in the Ford last night. I set three traps near the one on the ground and one inside the box in the Ford.

This morning the set on the ground held two *Peromyscus m. sonoriensis* and the one in the Ford held a *Mus. m. musculus*. This animal must have taken up its abode in the box when the camp was at Lone Pine and goes to show that the automobile may yet be the means of transporting these rodents to the most rural places, even the higher mountains!

While I prepared the skins, Aunt May packed up as much of the camp stuff as possible and we pulled out for Mjave about 1 p.m.

Nothing of note was seen along the route and we arrived in Mojave just as the sun was setting.

After a hasty supper and the purchase of a few supplies we set out for the type locality of *Dipodomys mojavensis* which is located 5 miles north of Mojave and  $\frac{1}{2}$  mile east of the R.R. Station of Warren. This locality was reached in the late dusk and the traps strung out.

I could not see well enough to pick my country carefully but judging from the precise locality given by Grinnell I judged it must be out of the Creosote association so chose that type of ground.

October 22nd 1922

The night was made miserable by a cold canyon wind and the many automobiles and trains passing. The screaming whistles of the latter would awaken the most sound sleeper even when used to having a good deal of noise about, but when a fellow has had the solitude of the desert for many months the first night's stay near a busy railroad is torture.

The catch was beyond all expectations, surely an exceptional type locality, indeed, for my traps held 23 *Dipodomys*, most of which are *D. mojavensis*, five *Omychomys* and two *Peromyscus m. sonoriensis*.

The small traps played havoc with the average of perfect specimens but I felt real energetic and put up the whole thirty in  $7\frac{1}{4}$  hours flat with Aunt May's help in pinning them out for me.

The specimens plainly showed their proximity to the railroad as nearly all of them were smoke stained like birds taken near a large city.

The traps were again set thru the same associations as chosen last night.

The evening was an exceptionally fine one and it was a great pleasure to watch the creeping shadows start at the base of the western mountains and slowly spread over the wide expanse of desert, turning to deep purples as the night came on. A large forest fire was burning towards the south some where near San Bernardino and a burning peak on the horizon made a brilliant glow in the sky which was accentuated by the fast approaching darkness.

October 23rd 1922

My traps held another "bumper" catch. Two *Omychomys*, one *Neotoma i. desertorum*, one *Peromyscus m. sonoriensis*, one *Dipodomys m. merriami* and nineteen *Dipodomys*. I viscerated the catch and packed up to move on to the next collecting station, Oro Grande, San Bernardino Co., Calif.

The trip across the desert was a delightful one. The day being just cool enough to be pleasant.

Nothing of interest was seen enroute until within 10 miles west of Victorville where several *Dipodomys deserti* colonies were seen. This is the nearest place I have yet seen signs of these animals to the type locality near Hesperia.

We arrived in Victorville about 1 p.m. and after lunch in the local cafe I purchased a few supplies leaving about 2:30 for Oro Grande, seven miles farther north.

Nearing the place a sharp watch was kept for a good collecting place and I did not find it until after passing the town. Camp was established in the sunny bottom of the Appelton Land Co.'s ranch and the manager, Mr. Thompson, proved a royal host.

Large Cottonwood trees were growing all about and numbers of small ash trees were seen.

Woodrat nests were abundant and as this was the type locality of this species - *Neotoma f. mohavensis* I was well pleased.

October 24th 1922

The day was spent preparing yesterday's catch, and in the evening I set my thirteen rat traps at large Woodrat nests, Aunt May had selected during the day.

Camp was again situated near a noisy railroad and the nights were miserable.

October 25th 1922

My rat traps held ten *Neotoma f. mohavensis* and they were some of the largest Woodrats I have ever seen.

The forest fire seen a night before last was raging in the mountains near Squirrel Inn and by the appearance of the large volume of smoke the whole western end of the range is on fire. Good by - *Perognathus alticola*!

I again set my ~~xxxx~~ rat traps near the nests of Woodrats but Aunt May in her search this afternoon was unable to find such large nests as she did yesterday.

October 26th 1922

Dawn broke with a heavily overcast sky which threatened rain at any time.

My traps held five *Neotoma f. mohavensis*, three *Peromyscus truei truei* and two *Peromyscus b. rowleyii*.

The latter specimens were taken near old deserted

Woodrat nests and were indeed a surprise from this locality.

After getting up my five Woodrats it was decided to pack up and leave as the weather seemed to be turning worse. I drew the five mice and we left about three p.m. arriving in San Bernardino about dark.

October 27th 1922

The forecast of bad weather proved right as rain began falling this morning. It came as a welcome rain indeed, for it extinguished the big fire which was burning over the mountains. Fortunately it spared the known localities where *Perognathus alticola* has been taken, but I fear it took a great deal of its range to the eastward.

I put up my five mice ~~xxx~~<sup>left</sup> from yesterday and Aunt May and I proof read the accumulated specimens.

October 28th 1922

I packed up and left for Pasadena terminating the field operations for this season.

The mountains were covered with snow and the air was crisp, making the journey rather unpleasant.

November 11th through 15th 1922

Trip L.M. Huey with Frank Stephens to Stephens'  
ranch in La Puerta Valley, eastern San  
Diego County

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November 18th and 19th 1922

Cuyamaca Mountains

-----

December 1st 1922

Flynn Springs

-----

December 24th 1922

Christmas Bird Census with Mr. Abbot, Director,  
San Diego Natural History Museum



November 11th 1922

I left San Diego as the guest of Mr. Frank Stephens about 8 a.m. for a five day trip to his ranch in La Puerta Valley, eastern San Diego Co.

The day was one of rare beauty and the sky was hung with fleecy white clouds which still were being blown about by gentle breezes after the rain storm two days past.

While the roads were damp, they were not muddy tho occasional puddles were still to be seen. This feature added to the pleasure of the trip for the usual coating of dust which envelopes the traveler over the dirt roads was lacking and the balmy air seemed filtered by the storm.

Nothing of interest was seen until we rolled into Ballena Valley about noon when I chanced to see a Mountain Plover flying near the road side. I was unable to get a shot at the bird, it was watched out of sight over the northern hills.

Near the ranch house of George Sawday in Warner Valley a fine Golden Eagle flew over the road in front of us and alighted in a tree nearby. The place was posted with "No Shooting" signs so we drove on to the ranch house, a few hundred yards distance to ask permission but found no authoritative person there, so gave up the chase.

The desert divide was soon reached and we began descending into the interesting desert association.

The first hint of desert after passing the thick chaparral of dense brush was the numerous clumps of Cat claw (*acacia greggi*) which grew abundantly on the slopes just before reaching the floor of San Felipe Valley.

Several very large bunches of Valley Quail were seen here and a Prairie Falcon lurked in the air at a safe distance, no doubt awaiting his chance to swoop up a Quail for his afternoon meal!

On the nearby level floor of San Felipe Valley many beautiful large Mesquite Trees were seen, some of which were fully eighteen inches in diameter. A few Desert Sparrows were seen here and several small flocks of Gambel Sparrows flushed from the road side as the Ford truck rumbled past.

A new road is under construction thru the valley and we traveled upon its level grade for several miles.

Near the east gate of the San Felipe ranch another bunch of Quail was seen and I was successful in killing two fine males with my aux.

~~xxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx  
xxxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx~~

2339 Laphor ty x c Vallicola ♂ 265 2340.

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A fine stream of water was running down the river bed towards its sinking place, ultimately making its way to Salton Sink in the Colorado Desert to the eastward.

Leaving the valley we turned up a gradual incline passing several desert homesteaders who were playing a hard game with their high hopes and a dry farm. The road was good and we sped along fine at the full speed of 15 mi per hour. Creosote brush began to appear and as the road neared the rocky hills agaves were seen scattered over the rocky slopes.

We rumbled over a very rocky hill which was the first bad road encountered so far tho it was but a few hundred yards long. This shaking, however, was only a warning of the few miles just ahead and we were soon bouncing and bumping over the worst stretch of the trip.

The county began showing more of its desert growth and a hill covered with ocotillos was passed tho these shrubs were now nothing but thorny sticks, ten feet high with neither leaf nor blossom to tell they were alive after the summer's scorching!

The road became worse! Rocky, steep and narrow and such a road! After we were over it I wondered if the machine would still be strong enough to get back, tho I have all Faith in the Flivver!

However, alls well that ends well and, as is said of all roads, never cross the bridge until the bridge is reached, so after getting over the rough road I will not worry about the return, until the time to return, and the bumps just passed were soon forgotten as we rolled again at full speed down the sloping floor of La Puente Valley with but a few miles more to go.

Creosote seemed almost the only growth in the Valley and it was exceptionally large, so tall, that when we finally got into its thickest, the view of the valley was almost screened from us.

We arrived at Mr. Stephens' ranch just as the "Long Shadow" touched the bases of the hills on the eastern side of the valley and I got out my traps as soon as possible and made my way towards the rocky hills on the east to set them out.

As I was walking along I saw a fine large Desert Jack Rabbit which I collected.

x 15 - *Lepus c. deserticola* Mearns

The traps were set out over a boulder covered hill and much signs of *Neotoma* was in evidence among the rocks.

As I topped the hill crest a Poorwill was flushed and I hastily retrieved my gun from its resting place near the beginning of my trap line. Good fortune prevailed and I was successful in flushing the bird again.

2341 *Phalacroptilus n. nuttalli* ♂ 200.

While finishing up the trap setting a small bunch of Mourning Doves passed by on their evening flight.

After dinner I skinned the three birds by lantern light.

November 12th 1922

I was out very early long before sunrise after my traps.

Near the foot of the hills a fine large bunch of Valley Quail were seen. I shot twice with my aux but the birds were not within killing range.

My traps held an abundant catch eleven *Dipodomys m. semialus*, five *Perognathus f. pallidus*, eighteen *Peromyscus e. fratuculus* and a single *Neotoma i. gilva*.

16 *Perognathus f. pallidus* Mearns

203 - 116 - 23 - 6 ♂

17 do

202 - 118 - 24 6 ♂

18 *Perognathus f. pallidus* Mearns

180 - 90 - 24 - 6 ♀ A.B.H. - 11 - 25

19 do

185 - 105 - 23 - 5 ♂ A.B.H. - 11 - 25

20 do

180 - 98 - 23 - 5 ♀

21 *Peromyscus e. fratuculus* Miller

192 - 106 - 20 - 17 ♂ A.B.H. - 11 - 25

22 do

200 - 115 - 20 - 15 ♂ A.B.H. 11 - 25

23 do

185 - 100 - 20 - 15 ♂ A.B.H. - 11 - 25

24 do

190 - 105 - 20 - 15 ♂

25 do

196 - 108 - 20 - 16 ♀

26 do

185 - 98 - 20 - 15 ♀

27 do

191 - 110 - 20 - 16 ♀

28 do

203 - 116 - 20 - 16 ♂

29 do

187 - 101 - 20 - 16 ♀

30 do

195 - 108 - 20 - 16 ♀

31 do

182 - 102 - 19 - 15 ♀

- x 32 *Neotoma i. gilva* Rhoads  
235 - 150 - 34 - 27 ♂
- x 33 *Dipodomys m. simiolus* Rhoads  
245 - 145 - 38 - 10 ♀ A.B.H. 11 - 25
- x 34 do  
260 - 155 - 38 - 10 ♂
- x 35 *Dipodomys m. simiolus* Rhoads  
240 - 140 - 37 - ♀ A.B.H. 11 - 25

I set my traps up a very rocky slope this evening and many species of desert flora were present, *Ocotillo*, *Agave* and several species of cacti.

Numerous wood rat nests were seen tucked under and between large boulders and all were well protected with an abundance of cactus thorns which the animals had collected by eating away the fleshy part of the chollas and using the thorn clusters for a "door mat". This must make an effective barrier for both snakes and carnivorous animals.

While on the hillside I saw a raven flying over the valley and his hoarse croak was plainly audible in the quiet windless evening.

Returning to camp in the late dusk I saw a peculiar white spot fluttering thru the brush, I fired at it twice and then discovered that I was shooting back of a cottontail rabbit!

After supper I set about twenty mice traps thru a patch of weeds near the house where I had noticed a great deal of *Dipodomys* digging. While setting the traps a Horned Owl was heard hooting from the hills near by.

November 13th 1922

My traps near the house held one *Peromyscus m. sonoriensis* and eleven *Dipodomys m. semialus* but unfortunately most of the latter species had fractured skulls as they had been trapped in the small traps.

The line on the rocky hillside held an abundant catch, eighteen *Peromyscus c. fraterculus*, ten *Perognathus s. spinatus* and two *Neotoma i. gilva*. The *Neotoma* seem to be different tho age may account for the strange appearance.

A Rock Wren was caught in a trap near the end of the line and was still warm when picked up. Returning to camp I shot another one and near the hill where I had trapped on the twelfth I again encountered the band of Quail. I shot five times at them with the big gun and then auxed the only two Quail taken!

After breakfast I took all the gopher traps to be found (9 of Mr. Stephens' and 8 of my own) and started

out for the type locality of *Thomomys b. puertensis* - Grinnell which is about a mile east of camp and at the altitude of 2000 ft.

A small clear stream was found running thru the dry barranca and its edges were green with a rank growth of watercress.

Mesquite was growing abundantly on the plain above, some of it was in the shape of large thick-bodied trees and others were growing in low thickets. This tree is very adaptable making either large trees or thickets, depending on circumstances.

Along the wet floor of the barranca an abundance of Screw bean Mesquite was seen while fair sized willows were scattered along. A single thicket of large Arrowweed grew near the old Adobe ranch house and no doubt more of this species of brush could have been found by further exploration.

This oasis proved a paradise for birds and many were seen. Quail were everywhere and it seems like every Mesquite harbored a *Phainopepla*. Each bird standing guard of his clump of mistletoe berries by perching on the tip top of the highest branch.

Near the stream I saw several Phoebes both Black and Say and as I was busy setting the gopher traps a scattered bunch of Mountain Bluebirds flew over.

As I was going back to camp I collected three *Phainopeplas* and on retrieving one from the middle of a scrubby mesquite thicket I saw what I firmly believe to be the nests of *Neotoma v. albigala* near the bases of the trees.

Up on the plain amongst the low thorny desert brush I saw two pair of Blackthroated Desert Sparrows and collected two specimens. The "cheeing" of a Western Gnatcatcher was heard and I caught a glimpse of the bird as it flew from bush to bush so the identity was certain.

Several Red shafted Flickers were seen flying past and one was collected near the pump house on Mr. Stephens' ranch.

2342	<i>Lophortyx c. vallicola</i> (Ridgway)	
	♂ 260	alt 2100
2343	do	
	♂ 260	alt 2100
2344	<i>Salpinctes o. absoletus</i>	
	♀ 145	alt 2100
2345	do	
	♀ 140	alt 2100
2346	<i>Amphispiza b. deserticola</i>	
	♂ 140	alt 2100
2347	do	
	♀ 140	alt 2100
2348	<i>Phainopepla nitens</i>	
	♂ 195	alt 2000
2349	do	
	♀ 199	alt 2000
2350	do	
	♂ 200	alt 2000

2351	Asio wilsonius		
	♀ 340		alt 2000
2352	Calaptes e. collaris		
	♀ 325		alt 2100
36	Perognathus s. spinatus Merriam		
	160-85-21-5 ♀		alt 2100
37	do		
	165-90-21-5 ♂		alt 2100
38	do		
	175-100-21-5 ♀		alt 2100
39	do		
	160-86-21-5 ♂		alt 2100
40	do		
	180-105-21-5 ♂		alt 2100
41	Dipodomys m. simiolus Rhoads		
	240-140-38-10 ♀		alt 2100
42	do		
	245-140-38-10 ♂		alt 2100
43	Peromyscus e. fruticulus		
	147-65-20-15 ♂		alt 2100
44	do		
	185-105-20-17 ♂		alt 2100
45	do		
	172-95-20-16 ♀		alt 2100
46	do		
	185-107-20-16 ♂		alt 2100
47	do	A-B.H-11-25	
	185-103-20-15 ♀		alt 2100
x 48	Neotoma		
	300-135-33-26 ♀ im		alt 2100
x 49	Neotoma		
	215-66-31-27 ♀		alt 2100
50	Thomomys b. puertae Grinnell		
	203-63-28-5 ♂		alt 2000 Topotype
x 51	do		
	212-63-28-5 ♂		alt 2000 Topotype
x 52	do		
	218-65-29-5 ♂		alt 2000 Topotype
x 53	do	A.B.H.11-25	
	193-61-25-4 ♂		alt 2000 Topotype

After helping Mr. Stephens haul his workman out of the well I set out to look at my gopher traps.

I found four gophers had been taken during the day and all of them were males! This unusual occurrence was related to Mr. Stephens upon my return and I was surprised to learn that it had been his experience also, when he had trapped in the region a few weeks ago. There seemed to be no feasible solution to the problem tho it might be that the males are unusually active just before breeding season!

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I had taken all available rat traps with me with intentions of trying to catch a few *Netoma* in the mesquite thickets but by the time I had reset the gopher traps it was too dark to find Wood Rat nests, so I gave it up.

Returning up a barranca in the late dusk I saw an owl flush from a perch in a mesquite. It flew directly over my head and I fired twice without results. The foolish bird circled back just as I finished loading my aux and I made a good shot this time killing an adult Long-eared Owl.

After supper I skinned my gophers and about 9 p.m. set my mice traps thru the creosote brush near camp.

November 14th 1922

I was up <sup>very</sup> early and had my mice traps in before sunrise. The catch consisted of nothing but a host of *Dipodomys m. semioles*, about thirty in all.

After an early breakfast I went after my gopher catch. I found but two specimens this morning, both females, an adult and an immature.

The birds were all out rustling about in the morning sun but I was in too much haste to look them over carefully, however I collected a Sierra Junco, a San Fieo Song Sparrow and a Ruby-crowned Kinglet while resetting the traps.

I ran across an interesting thing this morning: three weeks ago a neighbor near by had a captive coyote get loose from him at the time the animal escaped it had a fifteen foot length of chain fastened to its collar, and this morning I found its tracks in the soft soil near the barrancas.

I had a number of skins left from yesterday and it was not until after lunch that I was able to get started on today's work.

2353	<i>Junco o. thurberi</i>	Anthony	
	145	♀	alt 2000
2354	<i>Melospiza m. cooperi</i>		
	155	♂	alt 2000
2355	<i>Regulus c. calendula</i>		
	105	♀	alt 2000
x 54	<i>Thomomys b. puertoe</i>	Grinnell	
	200-65-27-5	♀	alt 2000 Topotype
x 55	do		
	182-60-26-5	♀	alt 2000 Topotype
x 56	do		
	206-64-27-5	♀	alt 2000 Topotype
x 57	<i>Dipodomys m. simialis</i>	Rhoads	
	255-150-38-10	♂	alt 2100
x 58	do		
	230-135-37-9	♀	alt 2100
x 59	do		
	245-145-37-10	♂	alt 2100
x 60	do		
	248-141-38-10	♀	alt 2100
x 61	do		
	240-138-37-9	♀	alt 2100

x 62	do		
	235-140-37-9	♀	alt 2100
x 63	do		
	250-145-38-9	♀	alt 2100
x 64	do		
	240-142-38-10	♀	alt 2100
x 65	do		
	245-145-38-10	♀	alt 2100
x 66	do		A.B.H. 11-25
	245-146-38-10	♂	alt 2100
x 67	do		
	235-143-37-9	♀	alt 2100
x 68	do		A.B.H. 11-25
	235-133-36-10	♀	alt 2100
x 69	do		
	255-155-38-10	♂	alt 2100
x 70	do		
	245-145-37-9	♀	alt 2100
x 71	do		
	252-155-36-10	♀	alt 2100
x 72	Dipodomys m. simiolus		
	240-140-38-9	♂	alt 2100

I looked at my gopher traps this evening finding but a single specimen had been taken during the day. Not wishing to come back in the morning, as we were leaving for San Diego, I picked up all the traps.

No mice traps were set this evening tho Mr. Stephens placed several small traps inside the cabin.

November 15th 1922

To my surprise the only trap sprung within the cabin held an adult male *Perognathus p. penecillatus*, rather unusual, I thought, as the cabin has a cement floor, but Mr. Stephens says he catches mice of all kinds inside.

We made a seven o'clock start and everything went well. Nothing of interest was seen until we reached the eastern arm of Warner Valley, altitude 3100, where an American Rough-legged Hawk was seen perched on a small rock on a hillside near the road.

As we stopped it flew and came directly overhead. I fired but missed it. Then to ones extreme surprise after it had circled and hovered a few moments over the tule patches nearby, it returned to a hillside near the road where I slipped up and collected it.

A brisk east wind was blowing and a mile or so farther westward I saw a Ferruginous Rough-leg perched on the crest of a round hill about three hundred yards off. I tried "direct approach" but the bird was too wild and flew before I had hardly started. It circled high overhead and seemed to say that it purposely sat in vantage point to avoid such ominous proceedings!



Near the junction of the Pala Road to Warner Valley another American Rough-leg was seen but I could not get within gunshot. It was perched in the top of a dried tree and on taking wing gave a wonderful exhibition of flight, standing still like a kite for minutes at a time, then swooping toward the ground at some imaginary prey only to arise again for a minute or so to peer about.

2356

558

♂

alt 3100

We stopped about 5 miles west of Santa Ysabel for Mr. Stephens to collect some wild rose bushes for the University of Michigan, who are making a study of these plants. While he was getting them I shot a Calif. Jay

2357 *Aphelocoma c. californica*

285

♀

alt -

We had our lunch a few miles east of Ramona and after an uneventful journey arrived in San Diego about 4 p.m.

I had a great surprise in the evening when called out of the house to take a bird out of a mouse trap. In identifying a Nuttall Sparrow. This seems to be the first record for San Diego of this species.

2358 *Zonotrichia l. nuttallii*

160

♂

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November 16th 1922

I was busy most of the day skinning my specimens. The stomach of the Rough-leg held an adult *Thomomys* and six Grasshoppers. The gopher was swallowed in two portions, the tail and vertebrae from the thorax back was found in the stomach inside the bird (Grasshoppers also were found here) and the head with feet and thorax all intact were in the crop. The gopher had apparently torn in two and swallowed.

November 18th 1922

Aunt May and I left San Diego about 2:30 with enough of an outfit to spend the night. Ray, Erma and the Daly family went in two other Fords, and after an uneventful journey made camp on the Tally ranch, which is situated about six miles south of Julian, on the north slope of North Peak in the Cuyamaca Mountains.

The country was most beautiful in its golden autumn splendor as all the deciduous oaks were at the height

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of their fall colors, and the mountain sides were grand with the mottled Gold and Green.

We did not reach our camp site until after dark and after a late supper I set my mouse traps thru the chaparral by lantern light.

November 19th 1922

I was out before sunrise this morning and by making life miserable for the rest was successful in having every one up in about two hours!

My traps held but two specimens a *Neotoma f. macrotus* and a *Dipodomys a. simulans*. The latter specimen came as a surprise from this locality.

I was rather perplexed at the fact that no *Peromyscus* were taken as the line was ideally located for them being set thru a heavy growth of manzanita, around a rocky stretch and near fallen logs. However, the very cool weather may account for animal inactivity as there ~~was~~ was a crust of ice on the water bucket and white frost was everywhere.

After breakfast Aunt May and I went hunting. Birds were abundant and many birds were seen. Calif. Jays, Sierra Juncos, California Purple Finches, Calif. Woodpeckers, Spotted Towhees, Anthony Towhees, Western Bluebirds and a pair of Western Red-tailed Hawks sailed about all morning.

I found a covey of Mountain Quail in a dense thicket and by squirming about on my stomach collected one at short range. A Spotted Towhee was collected and not being killed instantly let out a screech which was answered by a lot of Calif. Jays and a single Blue-fronted Jay. I killed the latter.

Band-tailed Pigeons were abundant and seemed to be feeding on the large acorns of the Canyon Live Oaks. By a streak of good fortune I collected a female with my aux.

Aunt May's success was as always - Good. She killed a White-headed Woodpecker, a Spotted Towhee, a Calif. Jay, a Calif. Purple Finch and a Mt. Chickadee.

While she was sitting under an oak that was heavily laden with Mistletoe two *Phainopeplas* were seen feeding on the berries. She shot the male but only mortally wounded it and it flew to a nearby cluster of mistletoe and died out of reach.

We started home about 3:15 going via Cuyamaca Lake and Descanso. Thousands of Coots were seen on the lake

and by the roadside we picked up two Eared Grebes which some hunter had shot for ducks and finding his mistake had thrown his victims by the wayside!

North Peak - Cuyamaca Mts, S.D. Co Calif. alt. 4500

- 73 *Dipodomys a. simulans* (Merriam)  
295-185-43-13 ♀
- 74 *Neotoma f. macrotis* - Thomas  
360-172-37-25 ♀
- 2359 *Xanopicus* ♂  
245
- 2360 *Columba f. fasciata*  
355 ♀ im
- 2361 *Oryortyx p.* ♀  
260
- 2362 *Cyanocitta s. frontallis*  
308 ♂
- 2363 *Aphlocoma c. californica*  
275 ♀ im
- 2364 *Pipilo m.* ♂ ♀ im  
218 im
- 2365 *Pipilo m.* ♀ im  
210 im
- 2366 *Carpodacus cassini*  
160 ♀ im
- 2367 do ♂ im  
165 im
- 2368 *Penthestes g. baifecyae*  
125 ♀
- Cuyamaca Lake
- 2369 *Podoceps* ♀  
300

November 21th 1922

- San Diego, Calif.
- 2370 *Passer domesticus*  
155 ♀ im

December 1st 1922

The past few days have been stormy and a heavy blanket of snow covered the mountains.

The day was one of those charming, balmy summer ones which make our part of California famous so I set out for Flynn Springs to see if the usual migration of Passerelly had arrived.

Arriving there in due time I researched the hillside over carefully without results -and collected but three birds - one *Zonotricha coronata*- one *Zonotricha l. gambeli* and one *Toxostoma r. rechivirum*.

Migrants were plentiful and I saw many Mountain and Western Bluebirds, Audubon Warblers and Gambel Sparrows along the route.

Cassin King birds seemed extra abundant this year tho they may shift farther south with the later storms.

Flynn Springs, San Diego Co., Calif.

2371	<i>Zonotrichia coronata</i>	♀
	190	
2372	<i>Zonotrichia l. gambeli</i>	♀
	160	
2373	<i>Toxostoma r. redivivum</i>	♂
	305	

December 24th 1922

I was invited by Mr. Abbot, Director of the Natural History Museum, to accompany their party on a Christmas Bird Census of the San Diego Region. This is an annual affair celebrated in many parts of the United States by the American Association of Audubon Societies and was the initial expectation in this part of the country.

I was up at day break and while waiting for one division of the party to call for me, recorded several birds in the backyard.

The personal of the observers was divided in two parties. Mr. C. de W. Scott with Mr. started from La Jolla working the sea shore and Mission Bay with the understanding of a rendezvous at Grossmont store as near 1:30 p.m. as possible.

Our party consisted of Mr. Abbot in his machine, accompanied by Mr. Clark, Mr. Anthony and myself. Mr. Clark was unanimously elected to the office of recording secretary and our filed system was greatly assisted by his efforts.

The route selected by our party followed 30th Street to the intersection of National Avenue, thence along the Tia Juana road to a point near the city limits.

Our first stop at the bridge over the Cholla Valley Creek proved fruitful and such birds as Calif, Shrike, Spotted Sandpiper, Least Sandpiper, Western Sandpiper, American Egret, Western Willet, Light-footed Rail, Marbled Godwit, and Belding Sparrow were recorded. After a short stop for observations we moved along, leaving the paved road near Silver Gate. On the damp flat commons we added Western Savannah Sparrow to the lists by seeing a single individual perched on a bit of board near the roadside drying its dampened plumage in the glorious morning sunshine for indeed the day promised to be extremely warm and balmy at this early hour!

Our next stop was on the bridge which spanned the tidal slough just before reaching National City and here we added many new species to the list. Birds fairly swarmed the exposed tide lands for the tide was low.

Many of the shore birds were present, seeking their morning meal near the water's edge & about two hundred Tree Swallows (*chredipocene bicolor*) were seen hovering over the tide lands. As we watched, several individuals passed very close overhead and the identity was without question. A Snowy Egret was seen on the Bay shore and proved a "subject of question" until it flew closer in and was subjected to our close scrutiny with the field glasses tho when we were too close for the bird's ease of mind, it flushed and the identity was correct.

Driving on a few hundred yards we again stopped and walked to the bay shore a few rods to the west.

Here several more new species were added and the list began to swell rapidly.

Our next stop was in the midst of human dwellings in old National City and Pipits, Brewer Blackbirds, Killdeers and a lone Mocking Bird were entered on the list of birds observed.

Turning east near the old N.C.&O railroad shops we noted a Western Belted Kingfisher perched over a slough on a telephone wire.

By this time we began to feel jubilant over the fast growing list and put forth all efforts whetting our eyes to the keenest, to help make the day a real record day.

After making<sup>3</sup>turn or two in the Olivewood District we soon entered the Valley of the Sweetwater river and a Burrowing Owl perched on the edge of his burrow, near the roadside, was listed as the machine bounded from bump to bumps!

Stopping at a Tule swamp we listed several more individuals and one new species, a Lincoln Sparrow!

Not wishing to waste our valuable time we pressed on and turned into a Canyon near old "Nigger Charlie's".

Near the Canyon mouth, from the steep cactus covered slopes, the cheeing of a Gnatcatcher was heard and upon searching out the tiny creature we added Western Gnatcatcher and a pair of Mourning Doves.

We again stopped farther up the canyon and just before we did so a small covey of Valley Quail was seen in the road. When the car came to a standstill Mr. Abbot spotted a lone Western Robin in an old Walnut orchard, chance luck was again in our favor tho little did we think that this was to be our only Robin!

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A Western Red-tailed Hawk was seen preening his feathers in the morning sun from his vantage point in the upper branches of a leafless Walnut tree and as we made our way on foot up a side canyon, the "wizzy wizzy" song of a Cactus Wren was heard.

As these birds were desirable I collected the songster and upon returning it a second specimen was secured nearby.

Up the canyon further Pallid-Wren tit and California Thrasher were soon recorded and as we carefully picked our way thru the cactus, the keen eyes of Mr. Abbot spied an adult Sharp-skinned Hawk perched in the lower branches of an Elderberry bush in a cactus thicket. The bird was up to his old tricks of uttering a strange clucking sound which was audible to all three of us as we peered about. According to custom this tyrant was executed on sight.

Nearby, a pair of Black-tailed Gnatcatchers were recorded and as we climbed out of the canyon a lone Bell Sparrow was observed.

We combed the brush-covered Mesa for Rufous-crowned Sparrows without results but did flush a single Western Vesper Sparrow from his grassy haunts.

Returning we pressed on, passing thru a nice grove of bearing avocados enroute to the main highway.

We arrived at Bonita in short time and stopped near a large tule patch. Tule Yellow-throats were in evidence and several were seen but as always, its the sudden unexpected things which gives zest to the bird student and the ~~xxxxxx~~ cluck-cluck of a Virginia Rail in the swamp brought up the list one notch higher and the cawing of a pair of Ravens as they flew up-valley raised it one more!

Passing on up the valley nothing of interest was seen until we were a mile or so east of Sunnyside where Western Bluebird took his place in our records, incidently several Audubon Warblers and an individual of each Black and Say Phoebe were seen on close proximity.

Turning into the hills just before reaching Sweet-water Dam four Sparrow Hawks were seen perched on a high voltage power line, evidently unaffected by the electricity in the wires!

Near La Presa we searched a rocky section for Rock Wrens without results but did spy a Cooper Hawk circling high overhead.

Our next record was that of a lone Golden Eagle sailing in wide circles with set pinions in the distance, but not too far for positive identification.

And after the eagle came a lone Horned Lark, which was disturbed from his dusting near the roadside as we sped past and we made that entry on the Fly!

Stopping at a point about the center of the north shore of the reservoir we skirted the lake on foot with only moderate success. A "Duck Drive" was in progress and almost every thing in the Duck line had been swept ahead or chased out.

The latter course had been taken by a pair of Great-Blue Herons and a lone Egret as they kept each other company in the middle of a newly plowed field, out of harms way!

We spent but little time here and while a thousand individuals was added to the coots, only two new species were seen - Cinnamon Teal and Pintail.

In a small bay, near the eastern end of the lake, we saw a single Shoveler Duck and a couple of Ruddys. They had chosen a place of safety near the shore and where the tules formed a barrier to the boats on the lake, evidently they were birds of long experience on that lake! for a boat had only just passed by without disturbing them.

Several California Gulls were seen flying over the water and perched on the shore side of a small patch of tules a Bittern had taken refuge from the horde of hunters that infested the lake. However, he was not beyond the reach of keen eyed naturalists and his name was duly entered.

Near Newida on Bald-headed Springs two Mountain Blue-birds were seen perched on a telephone wire near the road side and added to the list.

Stopping at the county road barn on the Monte Vista Ranch Mr. Abbot searched about for a pair of Barn Owls that he knew to be about, tho it was only by his persistent ~~endeavor~~ endeavor that a single "Monkey faced" was chased from his day roost under a "loading chute" in a gravel pit on the nearby hillside.

Crossing the Sweetwater river we drove up the canyon a short distance towards Jamul and soon had California Jay, Nuttall Woodpecker, San Diego Wren, and Plain Titmouse on the list. The latter specimen again proved to be a surprise and was collected as was the Nuttall Woodpecker. I took a long shot at the Wren but did not kill it tho the interorbital line was plainly visible and gave perfect identity.

We hastened on, backtracking along the route until the Sweetwater river was again reached.

Following the river towards Dehesa we failed to record any new species until the Weddle ranch was reached, where by definite search in an olive grove we found an individual Ruby-crowned Kinglet. Birds were extremely scarce here and we lost but little of our valuable time, for the hour of noon was past, and we were counting minutes now.

Speeding along at a lively clip I chanced to hear the chattering of a flock of Bushtits and the car was stopped on short notice for verification of the sound. While stopped we added numerically to the numbers of individuals and were pleased to add a new species with one dozen even in the bunch - noisy Bushtits!

Again we hastened on with an object in view of finding new associations where new species might be quickly added so we journeyed up Harbison Canyon stopping in a grove of Live Oaks.

I started up a side canyon where many large sumac bushes were growing. The place looked well suited for Passerella and I worked hard during our short stay, with no results, tho I believe that ~~specimen~~ or two could have been found if I had had time enough, for numerous scratched places were seen in the dead leaves under the scrub oaks and sumacs. However, a pair of Spotted Towhees were heard and one was collected.

Turning back towards our rendezvous at Grossmont we hurried on, adding birds to the list as we saw them, tho only one new species was found, a Red-bellied Hawk, that kept well ahead of us as we sped along. But we were well pleased as it made the 90th species for the day.

We were greeted at Grossmont by Mr. Scot and Mr. , who had been waiting about three quarters of an hour and had a list of over 60 species to report. It looked as if Southern California was going to carry off all records this year!

After a hasty lunch and making plans for further operations Mr. Scot and Mr. started back towards La Jolla while we turned towards Lakeside in quest of "Yon Carrion Crows".

Several individuals were added to the numbers of the lists, but no new species, enroute and when almost to our destination we were all pleasantly cheered by remembering the fact that Lakeside lake was a preserve and abounded with water birds!

We parked on the old race track and as we slowly walked to the water's edge, new species were added fast - Eared, Pied Billed and Western Grebes, Farallon Cormorants, Black-crowned Nightheron, Greater Yellowlegs and Ducks!! The lake was swarming. Mallards, Pintails, Green-winged Teals, Red-heads, Canvass Backs and Baldpates were easily checked off.



Several large Mallard drakes were waddling on shore opposite us and they were wonderfully beautiful in the afternoon light, their green heads with the shiny, glossy highlights glistening, as they eyed us, first with one eye and then the other.

Lakeside was well worth the trip but other possibilities were yet to be checked up and we started on our homebound trek via Mission Gorge where we planned one last stop.

Near Santee a large Hawk was seen perched on the top of a Sycamore tree near the road. We stopped and examined the bird with our glasses, identifying it as a Ferruginous Roughleg. However, I tried to stalk it but could not get within killing range tho the identity was made doubly sure when it flew past at about 80 yards.

Farther down the valley an American Roughlegged Hawk was seen flying over the alfalfa fields of the Fanita Ranch. I felt absolutely positive of the identity of this bird and shall record it with other occurrences of the species in Southern California.

It was almost sundown when we stopped at Mission Gorge and we all set out for our last fling. I started up the steep slope in search of either Rufous-crowned Sparrows or Hermit Thrushes and threw rocks into all the larger bushes in hopes of flushing them.

After some time I was rewarded by flushing a Hermit Thrush from a bush on the opposite side of a steep ravine. The bird flew downhill about a hundred yards and as Mr. Abbot was near by, I asked his assistance to help rout the bird again but we were not successful. After a dashing campaign over the steep slope I came upon a pair of Rufous-crowned Sparrows just as the evening shadows crept up the hillside. I watched them fully a minute wishing to collect the birds for specimens. I shot at the one farthest from me getting lots of feathers but no bird.

Nearby a bunch of Zonotrichia were flushed and a specimen shot. It proved to be a Golden-crowned Sparrow and was the last species added to the list.

A Cooper Hawk was seen flying near the hilltop searching for an evening meal.

Mr. Abbot joined me nearby and together we walked back to the machine. Enroute, another flock of Golden-crowned Sparrows was seen.

As we donned our coats and turned our steps towards home the few clouds in the western sky turned crimson and gold by the retiring sun. The drive over the grade, very enjoyable and indeed was the end of a Perfect Day.

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Birds collected Dec. 24th 1922

2 M. E. National City, San Diego Co., Calif.

2374	Heleodytes b. conasie	♂	<u>im</u>
	215		
2375	do	♂	<u>im</u>
	220		
2376	Accipiter velox	♂	
	280		

Jamacha, San Diego Co., Calif.

2377	Dryobates nuttalli	♂	<u>im</u>
	190		

March 7th 1923

Mrs. Canfield and I left about 8 a.m. for a day's collecting in the foothill region.

Turning east from National City we wound about over the rough adobe roads in Paradise Valley and finally stopped in a small canyon 2 miles east of the town.

The country was lovely in its fresh spring vendor and a great profusion of wild flowers were growing all about. Indeed, Spring was here as the pleasant song of California Thrashers could be heard from almost every sumac thicket and the cheeing of Black-tailed Gnatcatchers was noticed many times.

A few winter migrants were still to be seen as small bunches of Gambel Sparrows were found in suitable places and a single Hermit Thrush was shot as it flushed from a sumac on the hillside.

My mission was to secure some specimens of Sylvilagus bachmani cunirascens for mounting and both of us hunted carefully each ravine, brush patch and gully. Three rabbits were seen and a chance shot taken at one of them without results.

Deciding after a rather hard climb up the steep ravine that the possibilities were poor in this locality, we returned to the machine. Enroute a pair of Rufous-crowned Sparrows were seen on a grassy slope and near the Ford a peculiar looking bird was seen in the creek bed. I shot it and found the bird to be a Lincoln Sparrow.

Driving on we soon ran out onto the Mesa near Sweetwater Dam and deciding that the nearby canyons and rolling hillocks might be inhabited by rabbits & we again set forth.

I wandered about over the rolling hills without result when to my surprise I saw Mrs. Canfield emerge from a deep canyon with one of the desired Brush rabbits, so another trial was immediately started.

We searched the canon thoroughly and after gunning two Brush rabbits I was finally successful in killing an adult female.

Near the upper end of the canyon a pair of Rufous-crowned Sparrows and a pair of Black-tailed Gnatcatchers were seen and one of each collected.

Driving on we turned south and were soon in Sweetwater valley. The day was beautiful and the balmy air made me feel much better than did the sea breeze which swept the mesa tho I was about all in with a heavy cold which had been steadily growing worse thru the last few days.

Stopping for Mrs. Canfield to pick a bunch of poppies near Sunnyside I saw a nice Cottontail Rabbit near a corral & shot it even tho it was surrounded by the dairy man's poultry flock. Fortunately for me however was the fact that only the rabbit suffered.

Nearby several San Diego Red-winged Blackbirds were seen perched on an old brush pile. Looking them over I thought I saw a Cowbird in their midst and had Mrs. Canfield shoot it. But on picking up the specimen found only a female Redwing.

March 11th 1923

Mr. R.F. Stoudt and I made a very late start in the afternoon for a short collecting trip and headed east on El Cajon Boulevard towards La Mesa.

Turning north just before reaching the westward limits of the town we soon found ourselves in a beautiful deep canyon, down which flowed a rather sluggish stream, waste water from Murray Dam.

The influence of this stream was evident as many large tule patches were found and along the water course fair sized willow and Sycamore trees were growing.

The chaparral was clothed in its bright spring garb and many bunches of Coast Bushtits were heard as we drove along.

Descending the grade near Adobe Falls we stopped to collect as the place appeared most propitious.

Tules were growing abundantly and over the steep side hills were scattered. Many clumps of Lemonade Sumac bushes amid the sage and cactus. The Sycamore along the canyon bed were just bursting into leaf and several Audubon Warblers were seen darting thru their branches.

A single pair of Red-shafted Flickers were seen sitting close together on an old stump and acted very much as tho ~~xxxxxxx~~ they were searching for a prospective tree in which to dig their nest.

Tule Wrens, San Diego Song Sparrows and Tule Yellowthroats were found along the stream while the chaparral held its customary inhabitants such as Bushtits, Anthony Towhees, California Thrashers and Pallid Wrentits.

A very small flock of Gambel Sparrows were encountered but none were taken.

Returning back up stream about sundown several flocks of San Diego Red-winged Blackbirds were seen in the tule patches and a pot shot taken in their midst. Killing five specimens which of course fell in the tules in the middle of the stream!

While I was wading about searching for the victims a Coot was heard, giving the alarm call from his safe

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retreat amid the swamp and looking up as the flock of Redwings swept past overhead I saw an adult male Bi-colored amongst them.

By the time I had my specimens all packed away the sun had sunk so we hastened towards the machine.

Nearby, perched on the upper branches of a Sycamore was another large flock of Blackbirds, so as a parting farewell I shot again into their midst, killing a female Redwing and an adult male Western Brewer.

Apparently the Blackbirds in this vicinity are gregarious as three kinds were noted in the same flock.

March 13th 1923

Mrs. Canfield and I made an eight o'clock start for a day's collecting. This was the initial day of the tremendous task of getting the material for the 50 new school cabinets which must be ready for distribution by April 1st.

The first birds were found near the City limits near the National City Salt Marsh and we both succeeded in collecting a Savannah Sparrow each. Many Western Meadow Larks were singing over the grassy meadows but their association with man had made them wild and we were not successful in killing a specimen.

A few pairs of Horned Larks were seen flying about tho their numbers seemed greatly reduced compared with the abundance which I have known them in years past.

A Great Blue Heron was seen standing out on the green meadow and as I glanced across the salt marsh a lone American Egret stood out of harm's way in the tidal flats where the high tide had driven him.

Not being able to get within range of the desired Larks we drove on and as we came into view of the Sweet-water Marsh 29 Egrets were counted resting on the banks of a large estuary. Meadow Larks were abundant and near the Chula Vista side I stopped and walked about thru the luxuriant meadow.

I collected two Larks here and while tramping about a female Lark flushed from her nest at my feet. The nest contained 4 heavily incubated eggs and was the first to be discovered this year.

Not being satisfied with the results it was decided to go out east of Chula Vista into the Telegraph Canyon District where hunting possibilities were better.

When passing thru Chula Vista a small flock of Western Robins were seen near an avenue of olive trees on whose fruit the birds had been feasting. Many Flickers

were seen as we motored past the lemon groves for which the town is famous.

Near the broad mouth of Telegraph Canyon Meadow Larks were abundant and three were picked up in short order. The whole country side was decked in spring's most wonderful wildflowers and the air was permeated with their fragrant perfume.

Shooting Stars, yellow Violets, Brochias and the most gaudy bright red Paint Brushes were everywhere, nodding their lovely blossoms in the balmy morning breezes. Surely a day to thrill the soul!

Mrs. Canfield took a crack at a snake which was perching on an old bridge, but missed.

A few Gambel Sparrows were seen to flush from a large sumac while a couple of Audubon Warblers flitted about in the upper branches. The winter migrants seem to be moving and within the next few weeks will nearly all be gone.

A Flicker or so flushed from the brushes as I drove along tho the greater part of their populations have already passed on to the northward.

Ground Squirrels were out but not abundantly and in one or two places I noticed used runways of Microtus.

Driving eastward up the canyon towards Otay Mesa many birds were seen, Anthony Towhees, Mourning Doves, Anna Hummers and an adult Red-tailed Hawk. The latter bird flew directly over and a charge of number 10 shot failed to chop him, tho he was well within range.

Near Cockatoo Grove a pair of Mocking Birds were seen eating the fruit of a Tunis cactus and as these birds were well beyond the bounds of civilization and were on the wanted list I decided to collect them.

They proved rather shy and after a half hour's chase only one was ~~successfully~~ killed.

In a large sumac I saw a Western Gnatcatcher busily searching the foliage for minute insects and perched on the top of an old dead tobacco tree was a Say Phoebe, rather late for this winter visitor who should, by now, be well on his way towards his desert home.

Another Meadow Lark and a Savannah Sparrow were taken near the roadside and as the day was now past noon it was decided to turn the wheels towards home, so the journey was resumed. Traveling up canyon for a short distance we turned up a sharp grade which led onto the mesa and thence to Bonita.

On the mesa another Mocker was seen perched in the midst of a cactus patch and by a successful stalk added it to the list of collected specimens.

A very large flock of Linnets was seen perched on a telephone wire some distance away and having already about a dozen skins to prepare, it was decided not to shoot at them.

Near Bonita several Cassin Kingbirds were seen and near a small tule pond numbers of San Diego Red-wing Blackbirds in full adult plumage were seen.

Just before arriving in the residence district after leaving National City, we decided to look over the old Salt Marsh where many fine nests of Belding Sparrows have been taken by both Mrs. Canfield and myself and many boyhood days of mine had been spent.

Things certainly have changed! The Sparrows have decreased about 50% in numbers and their nests, even old ones, were hard to find tho I must admit this date is a couple of weeks early. However, in the hasty tramp over the old Sparrow haunts we failed to find a nest with eggs tho a couple which were believed to be new were found partky constructed.

We arrived home about 2 p.m. without further incident, tired and hungry.

March 15th 1923

Mrs. Canfield and I left about 8 a.m. for another day afield and as we entered Balboa Park by the north entrance, a fair sized flock of Barn Swallows were seen flying northward - the first migrating Swallows of the season.

We were bound for the mesaland east of National City but stopped a few minutes at the Ford agency in that town where the purchase of a new Lizzy was in progress and its arrival and delivery was expected soon.

Driving on eastward up Paradise Valley a fine adult Golden Eagle and a couple of Western Red-tailed Hawks were seen. The latter birds were swooping at the Eagle from above much to its distress.

Reaching the rolling open brush mesa birds were found to be abundant and some unusual migrants were seen.

The first birds to come under the death dealing gun were a couple Brewer Sparrows which I shot from a flock of about a dozen that weemed so out of place, perched on the top of a small Cholla cactus.

Sage Thrashers were scattered singly and in pairs all over the mesa and at least thirty birds of this species were seen. Four of their numbers were collected.

Linnets were abundant, scattered about the mesa in pairs or small flocks, feeding on the green seedpods of the various grasses and several of them were collected.

A rather brisk east wind commenced to blow shortly after my arrival and the appearance of the eastern horizon, where the atmosphere was already yellow with dust, gave promise of a repetition of yesterday's gale. This phenomenon was probably the cause of the unusual occurrence of the Brewer Sparrows, Sage Thrashers and birds which seemed so out of place, that were collected later in the day.

Meadow Larks were everywhere but exceptionally wild and I could only get within big gun range once when an adult female was collected.

Western Vesper Sparrows were not uncommon and I found them scattered singly over most of the mesa. Two specimens of this species were collected.

A pair of California Horned Larks were flushed several times and I was finally able to kill the male. They acted very peculiar and upon examination of my specimen I felt certain they were nesting.

The wind had become quite violent and it was decided to get into the valley region where the birds would be more abundant and less likely to be harassed by the wind.

As we passed along the road leading from the mesa down into Sweetwater Valley several small flocks of Western Mourning Doves were seen feeding in the weed patches. These were probably the vanguard of the large spring population that will inhabit the region later and they were not at all afraid of our passing.

Near Sunnyside a Western Meadow Lark perched on a telephone wire long enough to be killed for a school specimen.

Stopping at Bonita we climbed to the top of a nearby hill to a place where Chocolate Lilies were known to grow but were found to be in a dormant condition this season.

A bunch of Green-backed Goldfinches were feeding on the rods of dried Tarweed and I collected two specimens while Mrs. Canfield performed the most unusual feat of the day by killing a Cassin Purple Finch and a Golden-crowned Sparrow at the same shot as they perched side by side on a fence wire.

The occurrence of the Purple Finch was most extraordinary in this locality and I believe the terrific gale which blew nearly all day yesterday responsible.

About a dozen Ravens were soaring about overhead and I took a chance shot at one that ventured closer than the rest. This shot struck him but had only an effect of acceleration on his speed and the heavy pellets were all heard to spatter on the ground all around us as they



fell to earth after their wasted mission.

I made a check on the specimens and found twenty birds had been collected so we started for home where we arrived after noon.

March 18th 1923

We made an early start, bound for some good collecting locality in the Live Oak belt and chose a route eastward which would get us into the Ramona region.

Near Lakeside several Audubon Warblers were seen and as the lake was passed a large number of Tree Swallows were seen cooing over its sedge marshes.

Many ducks were still to be seen on the lake but I did not stop to determine their species. A brisk east wind was blowing at this point and gave promise of greater velocity as the day came on and I began to fear that collecting would not be possible if the weather should get worse. Tho, in spite of the elements, the journey was continued.

As Mission Grade was ascended the wind did get worse and by the time Ramona was reached it was almost a hurricane. A Dodge car, which sought shelter behind a building nearby had lost its top in Warner's Valley a few hours previous and judging from the increased violence which the wind had now reached during the past half hour, the Ford was destined to be almost blown over and collecting was absolutely out of the question!

After a short pause we turned westward into the canyon road which led down to San Pasqual Valley and after a few miles in the open where the wind threatened to tear everything apart, a sheltered nook was found amid the live oaks and near a small rill. Here we stopped and had our lunch. This "out of the way" canyon seemed overrun with picnickers who had started for other places, but were forced to find shelter here for the day.

The only evidence of bird life about was a single Audubon Warbler, a lone Turkey Vulture, that spent a long time maneuvering up the canyon into the gale and a Nuttall Woodpecker that kept uttering his rattling trill, defying the abundant intrusion of humans into his woodland realm.

Lunch being over we resumed the journey and were soon into the valley of San Pasqual. A few migrants were seen when a dozen Western Robins flushed from a single olive tree near the road and an Audubon Warbler flitted past. Birds were very scarce as the wind was ripping and none of the feathered tribe wished to be about in it, tho the locality is a veritable Birds' Paradise.

Driving on thru a lovely valley of green farms and open pastures we passed a small tule-bordered pond and I saw a swiftly disappearing bird which I felt certain was a Florida Gamble tho the bird was too quick for a shot.

After a few miles we neared the headwaters of Lake Hodges and on the lee side of some round long sloping hillsides which were covered with stubble, a number of birds were seen taking shelter from the wind.

Mr. Stoudt, who had driven along in his own machine and I stepped out for an hour's collecting and were successful in getting a fair lot, tho the birds were very shy.

Calif. Horned Larks were abundant as were Western Meadow Larks and Western Savannah Sparrows and each of the species were represented in our kill.

A specimen each of Western Vesper Sparrow and Cassin Kingbird were taken and incidently the only individuals of the species seen.

Driving on we were soon on the shores of Lake Hodges where hundreds of Coots were seen swimming in the rough waters, while large flocks of Tree Swallows were seen coursing over the lake. Passing southward over the concrete bridge we sped along on to homeward stretch and nothing more of bird life was noted for the wind blew violently over the mesas.

March 20th 1923

We made a fine early start this morning and chose Mission Valley as the best route for the day's collecting.

Birds were abundant this beautiful clear spring morning and I began shooting as soon as we were out of the town limits.

A Strike and a Meadow Lark were killed in lower Mission Valley and when passing thru Mission Gorge the pair of Golden Eagles, which inhabit the cliffs nearby, were seen sailing majestically about the rocky crags on the mountain tops and I watched them for some time as they appeared to be interested in a new nesting site.

Passing on the broad acreage of the Fanita Ranch was reached and the rest of the day's collecting completed.

A flock of 6 Greater Yellow-legs were seen standing in the shallow waters of the San Diego river and as I cautiously peered over the edge of a high bank which bordered a small pond, I saw a Carolina Rail dart swiftly into the rushes.

Several Coots and a small flock of San Diego Redwings were seen in the tules while a large flock of Tree

Swallows were flying to & fro over head. I collected one of the latter.

Perched on the fence nearby Mrs. Canfield found several Kingbirds and collected one each of Cassin and Western. The latter proved to be the first of the season hailed the coming of the spring migration.

Near a large vinyard a few miles west of Santee several flocks of Linnets were found and a good supply collected.

A pair of Srikes were seen near a large row of Eucalyptus trees and their nest was found. It was placed about ten feet above the ground near the main trunk of a fair-sized tree and held in place by a few young branches. The parent birds were collected and on climbing the nest was found to hold four fresh eggs.

Returning to San Diego via Jamacha many large flocks of Western Robins were seen as they flushed from olive trees which lined the road.

#### March 22nd 1923

When going home about 5 p.m. this evening, a large bunch of Cliff Swallows were seen flying near the large bridge at the western entrance of Balboa Park. These were the first of their species to arrive this season.

#### March 23rd 1923

An adult Arizona Hooded Oriole was brought in to the Museum from La Mesa where it had been found dead.

On skinning I found it well filled with internal parasites and had died from their ravages. This bird also marked the first arrival of the species this season.

#### March 25th 1923

Mrs. Canfield, Mr. Stoudt & his wife went out on a picnic today and finally had lunch at a place called Lawson Valley which is about 8 miles northeast of Jamul.

After their lunch was over Mrs. Canfield discovered an occupied Western Red-tailed Hawk's nest situated in the upper branches of a very large Live Oak tree. The nest appeared to be suitable for a museum group so Mr. Stoudt waited until the parent returned and shot it.

On their way home they collected a fine bunch of Horned Larks near Sweetwater dam.

On dissection the Hawk was found to be a male.

March 27th 1923

Mrs. Canfield and I started out about noon to collect the Hawk's nest found by her last Sunday and after an uneventful trip arrived at the spot about 3 p.m.

The tree proved to be a huge one and after a hard scramble with rope and climbing irons I was able to reach the nest which contained 3 eggs.

After the eggs were safely lowered in the fish basket I commenced the task of collecting the nest - and a task it really was for the limb was about 6 inches in diameter near the nest.

After an hour and a half the last rope was fastened and the last stroke of the saw drawn. And the nest, instead of falling as expected, clung by one of the projecting limbs above the nest.

I then wriggled the limb on which it had lodged and shook it loose when to my astonishment the rope broke and down she came. But the gods of luck went with it and it alighted stump end first without injuring the nest in the least.

After getting again to the ground I found the whole nest and branch weighed nearly 200 pounds and proved more than we could lift together so transporting it to the machine a hundred yards away and loading seemed to be problematical. However, after cutting a trail thru the brush the nest was dragged by main strength to the Ford and loaded with considerable difficulty.

The sun was now setting and so after securely tying the nest in, the homeward journey was started.

Enroute three brush rabbits, a Hutton Vireo and a Calif. Poorwill were collected.

The Vireo had an egg in her oviduct ready to lay.

April 3rd 1923

When returning home last night about dusk a Texan Night Hawk was seen coursing over the pansy bed in the Park.

And on this above date an adult Arizona Hooded Oriole was taken at San Diegito Canyon near Del Mar tho its arrival in the Museum was not until Apr. 5th.

April 5th 1923

Saw about 15 W. Robins flying over Bridge at evening time.

Typed to here ( Huey's handwriting)

April 29th 1923

Mrs. Canfield and I made an early start for a day afield.

Stopping at the salt marsh near National City we gave the place a thorough searching for nests of either Belding Marsh Sparrows or Light-footed Rails.

I had not been on this marsh for several years and was much depressed to find the census of the marsh birds so badly depleted for now only a few pairs of Belding Sparrows were to be found, when in 1914 or 1915 there were hundreds.

Not being successful we moved on choosing the old Sweet-water Marsh for the next objective.

As I turned off the road towards the salt marsh my path led across a small shallow water course in which the Ford stuck and only after an hour's hard work was I able to wrest it from the quagmire.

Meanwhile Mrs. C. found a Killdeer's nest nearby, containing 4 eggs.

We then proceeded to hunt over the marsh but were unsuccessful. Many American Egrets were seen and a large number of gulls, including California Ring-billed and Western while a lone Hudsonian Curlew whistled loudly as it flushed from the slough.

Two pairs of Texan Night Hawks and a pair of Calif. Horned Larks were seen near the marsh and were probably nesting tho no nest of either could be found.

We then turned our attention towards the foothills where Black-tailed Gnatcatchers might be found and hied us there as fast as Ford could travel.

Turning up a canyon that led southward from Bonita, we were soon in the heart of the Gnatcatcher country and after a half hour's stalk had a pair located. These birds were soon found to be feeding young on the wing and we immediately sought the haunts of other Gnatcatchers.

A California Poorwill flushed from his day roost nearby and I watched him down. Later I put my shotgun together and tried to find the bird again but I was destined to be foiled and the bird destined to a longer life!

A family of Rufous-crowned Sparrows were located with young on the wing and after a short chase one of the young was captured. It seemed so spry and active that I saved him to photograph alive.

Another pair of Black-tails were located nearby and we watched them about an hour without results. While watching the Gnatcatchers a small bunch of Brewer Sparrows came into the bushes near me and a single Gambel Sparrow was seen nearby. The latter bird was afterwards collected.

Becoming discouraged in this canyon we went up the next one to the eastward.

The luck was not destined to change, however, for I spent about an hour and a half carefully picking my way thru the brush and chollas without even seeing a Gnat-catcher.

Mrs. C. had a little better success and located a pair of birds which after watching them about an hour led her to their nest full of young.

She also located a Calif. Thrasher nest containing a single egg. The nest was situated about 3 feet above the ground in a small sumac brush.

May 5th 1923

Mrs. C. and I were invited as guests of Griffing Bancroft to spend two days in the Cuyamaca Mts. and we left about 8 a.m. in his Cadillac in company with his oldest son, Griffing junior.

Traveling east via El Cajon, Alpine and Descanso we were soon in the south slope of the mountains amid the pines.

Stopping in a small valley we searched about for nests. Griff found an old Blue-fronted Jay's nest placed in a recess of a hollow oak tree while Griff junior and myself found the probable summer home of several pairs of Western Martins and Violet-green Swallows in a dead tree and saw several pairs of Rough-winged Swallows clinging to a soft bank near the creek, evidently planning their summer homes too!

Mrs. Canfield found the only inhabited nest, that of a Plain Titmouse, situated about 20 feet up in a natural cavity of the Live Oak tree.

I chopped it out and found a completed nest, ready for eggs.

Driving on we stopped here and there along the way searching for nests with no results. This country was beautiful. The Black Oaks were just bursting into leaf and they were simply gorgeous in their new pinkish leaves.

As we topped the hill south of Cuyamaca Lake a most wonderful view was enjoyed as the verdant green meadows around the lake were in a burst of Springtime flowers. Blues and yellows everywhere in dazzling splendor.

Many Martins were seen flying near the lake in company with Violet-green Swallows and as we skirted its shores Ruddy Canvasback and Baldpate ducks were seen in small numbers while Coots were about in their usual abundance.

A very large flock of Bonaparte Gulls were seen flying about the lake, migrants they were, passing along towards their northern summer home.

California Woodpeckers were in abundance & their "wakeup" call could be heard from almost every oak grove.

Stopping near the northern entrance of the Cuyamaca Grant we searched for nests thru the forests of Oaks and Pines. Birds were fairly abundant and many Band-tailed Pigeones were flushed from the trees nearby.

I located a Slender-billed Nuthatch feeding young and Mrs. Canfield found a Cassin Vireo putting the first nesting material on the fork of a Live Oak twig.

Mr. Bancroft and his boy were not so fortunate and after an hour in this locality we were again on our way.

The next stop was made a few miles south of Julian where we searched about thru a heavy forest of Black Oaks, but found nothing.

Sunset was near and so it was decided to turn again towards Oakzanitas where we planned to spend the night.

Stopping at Cuyamaca Lake I spent a half hour talking to the dam keeper, Joe Peterson, who is a personal friend of mine, an acquaintance of many years.

Oakzanitas was reached in due time and while at dinner two small bats were captured in the dining room. These were put into my shirt pocket alive, much to the amusement of the innkeeper and the rest of the party. I later found that one of the specimens had escaped.

May 6th 1923

We were all out very early this morning searching about for nests thru the oaks.

House Wrens were abundant and their songs were heard everywhere. Several pairs of Plain Titmice were heard and Mrs. C. finally trailed a ♀ to her nest, apparently the ♀ did all the nest building, for this pair was watched some time and the ♀ was very industrious, carrying feathers and hair to the nest site while the male followed with a burst of song at every stop.

After a very good breakfast, and I must say the accommodations were exceptionally good here as mountain resorts go, we were again on our way stopping a few minutes here and there along the way, indeed a poor way to collect!

Near the Lake I collected a ♂ Junco and a ♂ Blue-fronted Jay.

Traveling on we stopped a few minutes near Julian to watch an old Martin colony where I had taken eggs several

years ago. The place was still inhabited and several pairs of the birds were flying about in company with a host of Violet-green Swallows.

Stopping again at Wynola we all searched thru a large grove of Live Oaks for birds' nests but were unsuccessful in the quest. I shot a ♂ Western Bluebird from a fence post nearby.

Driving on we had lunch in Ramona and then went out to Mr. Forward's Ranch which is located near the top of Murry Grade.

The place was frightfully hot and as usual, in mid-afternoon, birds were scarce.

As we were driving in I shot a Calif. Jay near the front gate.

We were cordially welcomed by Mr. Forward, who showed us around his ranch.

Near the barn a Plain Titmouse had her nest in a cavity of a Live Oak and by reflecting light into the hole several well-feathered young ones were discernible.

House Wrens & Linnets were abundant and their songs were heard all about the place.

Mr. Forward led us up a trail to a point about one mile west of the ranch house and en route the unmistakable song of the Gray Vireo was heard. Mr. Bancroft immediately began searching all about for the nest but was not successful. Near the end of the trail the object of the trip was reached where Mr. Forward displayed a peculiar shrub he had discovered. I brought specimens in to the museum for identification which was later given as Styrax californica - California Storax.

About midafternoon we again set forth at the usual speedy gait and after an uneventful journey arrived at the old Scripps ranch, 3 miles west of Santee.

Here Mr. Bancroft had a string of 14 bird boxes nailed up in the Willow bottom and we proceeded to examine them.

Many were inhabited by Western House Wrens and two or three sets were taken.

A Flicker had her nest in an old Cottonwood stub and I collected 7 eggs from it for Bancroft. As we were returning to the machine the keen eyes of young Griff spied a Yellow Warbler's nest up in the upper branches of a small straight Willow tree and upon examining the nest it was found to contain 4 eggs of the Warblers and one of a cowbird's.

Mrs. Canfield found a Willow Goldfinch's nest situated in the upper branches of a Willow tree and upon climbing



to the nest it was found to contain 5 fresh eggs.

On our way home via Mission Gorge we examined many of Mr. Bancroft's bird boxes all of which were uninhabited. We arrived home just after sunset a tired and shaken bunch.

May 7th 1923

This afternoon I started a campaign to obtain specimens for the identification groups, which is to be the next class of work undertaken by this institution and went out to Bonita for a few hours collecting.

Birds were abundant and I picked up ten specimens in a couple of hours. They included three San Diego Red-winged Blackbirds, four San Diego Song Sparrows, two Pileolated Warblers and one Calif. Yellow Warbler.

Of this lot Mr. Gillette selected two of the Redwings and the two Pileolated Warblers.

May 8th 1923

I again went out collecting this afternoon. The day was very warm and I found that the birds were very inactive.

Near Bonita I found a small colony of Rough-winged Swallows nesting in a bank near the southside and I collected a pair of the birds. About half an hour was spent digging in the soft sandy bank trying to find a nest or so but I had no luck.

Driving up the river a short distance I stopped near the Willows and collected a truck load of limbs - tules etc. for the Taxidermist and while so engaged I collected a pair of Western Kingbirds from the telephone wires nearby.

On my way home I chanced to drive past a large mustard thicket in a canyon off the highway and to my delight I found a pair of Western Blue Grosbeaks feeding in the thicket.

The male was killed first and the female required nearly half an hour of stalking before I finally got within killing range.

All the specimens taken today were given to Gillette.

May 9th 1923

I made a fine early start this morning and was soon in the beautiful Sycamore groves below Murry Dam. Birds seemed abundant and I saw many Red-winged Blackbirds, Song Sparrows and Green-backed Goldfinches.

Carefully working my way along a small rippling water-course I saw a Thrush hopping in the shadowy light underneath a Sycamore. The bird was collected and proved to be a Russet-backed.

Later on two more of the same species were collected and I surmised that a migration was in progress.

A single Black-headed Grosbeak was collected from a tree near the stream and was the only one seen all morning. This species seems extraordinarily rare this year. A phenomenon which I am unable to explain.

While I was packing my birds a ♂ Cowbird was heard in a nearby tree and I took a chance shot at it but did not kill. A ♀ Yellow-throat was seen feeding in the tules nearby and was collected.

While I was loading up the Ford with stumps, branches and tules for the Taxidermist a pair of Phainopeplas were seen. This was the first of the species seen this season.

Arriving home about noon I submitted the catch to Gillette who selected two of the Thrushes and the Yellow-throat, all of which were put in storage.

May 10th 1923

I went out collecting this afternoon again, but the wind was blowing so hard that the birds were scarce and I recovered but three, a Wood Pewee and a pair of Willow Goldfinches, all of which were taken at Bonita.

To fill in the day I brought home a load of accessories for the Taxidermist.

May 14th 1923

In company with Mr. and Mrs. Bancroft I made a nine o'clock start, bound for Cuyamaca Lake where we planned to nail up a series of bird boxes in a Martin colony.

Arriving at the lake after an uneventful journey except for the speed involved, I found summer birds abundant and commenced collecting.

Ten specimens were taken, a pair of Violet-green Swallows and Ash-throated Flycatchers, a male San Diego Towhee, a ♀ Bullock Oriole, a ♂ Western Tanager, a Western Flycatcher, a ♀ Tolmiei Warbler, a Western House Wren and as we were at work on the Martin boxes a Spotted Sand Piper was flushed by the lake shore and collected. All of which were given to Mr. Gillette.

Our homeward journey was made in the rapid time of 1:25 for the 70 miles distance.

May 16th 1923

It was reported in the Museum that a flock of Yellow-headed Blackbirds had been seen at the upper end of Sweetwater Reservoir on Sunday May 13 so I set out

this afternoon to collect some of these as they are badly needed in the Museum.

While traveling the highway about 3 miles e. of National City near the Sweetwater river an adult Green Heron was seen: flying into a ranchers yard and after hastily asking permission the specimen was collected and from a nearby tule patch three Red-winged Blackbirds were shot.

As I was driving along near Bonita, a ♂ Blue Grosbeak was shot in a grain field where it was feeding on the ripening grain.

Arriving at the lake in due time I found no sign of the Blackbirds tho I looked the place over carefully. So the journey was almost for naught.

South Is-

May 20      Sunday 1923

Arrived noon. Rough journey. Hunted Murrelets in aft.  
on east side of Is.

Found:    a 1    found in rock slide    no bird eggs  
          a 2    bird on 2 eggs under rock base of cliff  
          a 3    single egg rolled from nest which was  
10 feet back in crevice between boulders not inspected

L    1    bird inc. 1 other egg rolled a few inches out  
of nest. Bird uttered low call when touched on nest.

Many birds seen - Linnets, Song Sparrows, Dusty Warblers,  
Rock Wrens, Gulls etc. Saw Cormorant catch fish. 3  
Linnets found drowned in water barrels around small  
house & wood life preserved were put in.

Each of us found 2 single eggs of Murrelets in rock  
which were left

Little Middle May 21st 1923

Cave held but two single eggs.

Annie found fine set on north side of Is. Nest was against rock under bush. Bird Inc. a 4.

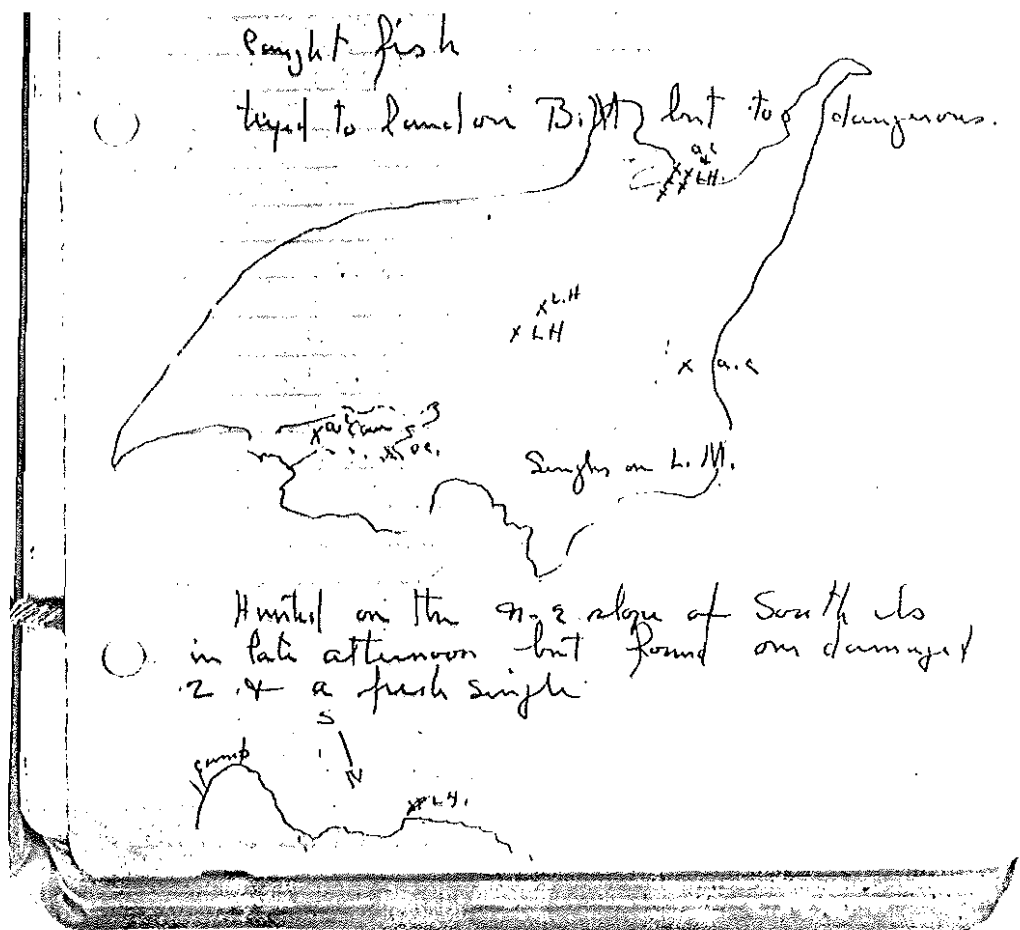
I found 2 single eggs near top of Island and took two damaged sets of two - L 234.

A slide on the N.E. slope of Is. held 5 single eggs of which 1 had the bird inc.

Caught fish.

Tried to land on B.M. but too dangerous.

Hunted on the N.E. slope of South Is. in late afternoon but found one damaged 2 & a fresh single.



May 31st 1923

In company with Mrs. Canfield and Mr. Abbott we left the Museum about 9:30 with my camp outfit loaded into the Museum's Ford.

Met Mr. Gallegos with his party including his friend, Mr. Morra, and John King his assistant at the Brewster Hotel.

After a few last errands we started on what promised to be the most interesting trip of my career - a month's expedition to the San Pedro Martir Mountains in Lower California.

Arriving at Tijuana, Mr. Gallegos showed Mr. Abbott and I about the Government building, introducing us to several prominent officials and explained his hopes of starting a small Museum (when he already had a room of fair dimensions to his command).

After a good lunch served in pre-Valstead manner, we proceeded on the first leg of the journey with Ensenada as our goal.

The trip was made over the coast route and nothing of exceptional note was seen enroute.

The afternoon was beautiful with just enough breeze to temper the bright sun which had warmed the countryside in good summer fashion and we all enjoyed the grand seascapes as they were brought into view by the speeding Ford.

Ensenada was reached about sunset and the personnel of the party increased to seven members when Mr. Slevin and Dr. Vandenburg of the Calif. Academy of Science, accompanied by Mr. Anthony, joined us at the Hotel Hidalgo.

June 1st 1923

Part of the day was spent in preparation for resuming the journey and about noon Mrs. Canfield and Mr. Abbott left for San Diego via the inland route.

About 100 members of the L.A. Yacht Club were in the town on a cruise and a barbecue was given them by the Ensenada Chamber of Commerce and was started at 1 p.m. with every man in town attending. Needless to say the members of our party attended the festivities and thought of the trip was nil.

However, towards evening Mr. Gallegos managed to shake some members of the Customs service up and spent an anxious hour trying to get the goods thru, even tho the work was in the government's interest they hesitated to pass it without duty.

In the evening, the town was gay with festivities and a regular Spanish dance was given in the town hall, where all the fair damsels turned out en masse.

As we were preparing for dinner, Gomez Farias, the government engineer who was to furnish automotive transportation showed up and informed us that his truck was out of town but would be back by tomorrow noon.

June 2nd 1923

This morning we were all astir preparing our outfit for packing on animals and all of us took a turn at wiring boxes, making lids etc. and to our delight the truck backed into the yard to be loaded in the late afternoon.

However, Mr. Slevin, Dr. Vandenberg, Mr. Anthony and John King were out on a lizard hunt and did not get back until sundown, so the truck was not loaded until after dark.

June 3rd 1923

We were all out at 4:30 this morning and by six were at the Chink restaurant having breakfast, so in consequence a fine early start was made with San Telmo as our goal for the day.

Mr. Gallegos rode with the outfit in the truck, which led the way and the rest of us followed in two Fords & Dr. Vandenberg's Pope-Hartford & trailer.

A great cavalcade it made and when a dusty stretch of road was negotiated every thing and everybody, excepting the leader had a very dusty time.

On reaching Santa Telmo Valley the first interesting bird was seen when a Harris Hawk was flushed from a fence post by the roadside.

We stopped here for a short time to cool the engines as the grade out of the valley towards the south was the most difficult one to be found on our route, and after starting we found it to be so, as the truck stuck on a steep pitch and one of the Fords did also, but only by lack of sufficient fuel. This disagreeable feature happened several times on the grade and it required the effort of every man in the party to put his shoulder to the cars and push with all his strength before the summit was reached.

This was the last of our trouble for the journey and about 3:30 we reached San Vicente where dinner was obtained at a Mexican's dwelling.

Leaving San Vicente about 4:45 we had an uneventful journey, reaching San Antonio del Mar at sundown.

Here we refueled and started onward in the dark, reaching San Telmo about 9:30.

The only event on this part of the journey was caused by the driver of the Ford in which Mr. Morra, Mr. Gallegos and I were riding when he failed to understand my directions at the San Quentin - San Telmo junction and pitched into a marsh. Fortunately Mr. Anthony, Mr. Slevin and Dr. Vandenberg were close behind and helped us push the car out.

The whole male population of the village greeted us and Mr. Gallegos immediately began dickering with different ones regarding the cost and possibilities of obtaining a suitable pack outfit for the mountains - and the more he talked the more gloomy became the situation, for these residents are of a peculiar disposition and had an idea that we were very wealthy, placing their prices accordingly.

A late supper was obtained at a house nearby and the main entree was tamales of such fine quality that they will long be remembered.

Sleeping quarters were made for us in the school house where the benches were set aside to make room for our beds and we all slept soundly through the night in spite of sonorous overtures from some members of the party.

June 4th 1923

This morning the discussion was again resumed regarding the pack outfit and I felt very sorry for Mr. Gallegos as they seemed to be trying to take advantage of him.

Meanwhile different members of the party began peering about in search of birds.

John King reported Cedar Waxwings and immediately received a hoot of derision from all ornithological members of the party, but John was on the job and proved his point by showing us 5 Waxwings busily eating sprouting buds in an apricot tree nearby.

Mr. Anthony fired the first shot killing a young Mearns Thrasher on the doorstep of the house next to the school. But the joy of his take was soon over, however, when I noticed an elderly Mexican woman scowling and glaring angrily in our direction a few minutes later. The situation was very obvious - he had killed her pet bird and on informing him on his delinquency he immediately send her a peso which compensated amply for her loss!

After an hour or so of delay most of us left for Las Pabras leaving Mr. Gallegos and Mr. Morra to attend to further arrangements.



About two miles east of San Telmo I shot a topotype Bryant Cactus Wren. The country seemed very propitious for this species and in every small draw, where a fine patch of chollas were growing, old nests of this species could be seen.

Our route led up a fair sized valley the floor of which was dotted here and there with small ranches where verdant cornfields waived beautifully in the morning breeze.

The flora on the hillsides was very interesting as large thickets of wild roses seemed to take the place of brush.

Several kinds of cactus were seen and I kept a sharp watch thru the thickets for old nests of Mearns Thrashers but failed to find even a suggestion.

As we were riding along I noted several species of birds -many Redwings were seen about the tule patches near the sloughs and each adobe house seemed to have a large colony of Cliff Swallows. A single ♀ Purple Martin flew close overhead and proved to be the only one seen in the valley.

After about 10 miles of travel the valley widened out almost two miles in width and was covered with a dense chaparral of cactus, and several species of brush. We crossed this area on the southern side and were soon again into a narrow rocky canyon where evidence of water was to be seen and the verdant green willows were abundant.

This place abounded in bird life and immediately I recognized such species as Long-tailed Chats, Least Vireos, Yellow Warblers etc. and as we were planning to spend a day or so at Las Cabras, which is only a short distance up the canyon my interest waxed.

Las Cabras proved to be only two small adobe houses with wide Remodels of poles and brush and a small orchard of several kinds of fruit nearby.

We piled our goods under one of the remodels and as soon as I was rested the collecting began and in short order I collected seven birds including one Calif. Jay, one Spotted Towhee, one Trail Flycatcher, one Least Vireo and three Song Sparrows, all from the willow association.

Mr. Anthony walked in about 4 o'clock, footsore and weary, having walked nearly all the way from San Telmo where he had left Mr. Slevin and Dr. Vandenberg, well down the valley where they put in the day collecting.

In the evening, while I was setting traps in a Microtus colony in the willows Mr. Anthony shot an adult male Vermillion Flycatcher from the fence near camp.

About six o'clock Mr. Gallegos came in and was rather disheartened with the poor progress he had made during the day - and nearly midnight Mr. Selvin and Dr. Vandenberg came in. They had spent about six hours stuck in the sand down the valley and were indeed a tired-out pair.

June 5th 1923

My traps held 3 *Microtus* and three *Reithrodontomys*. The *Microtus* was very desirable and I was glad indeed to get them, but was surprised to find all three specimens still warm when taken from the traps at sunrise. The traps were left out on the chance of a few stragglers during the morning hours.

After breakfast we all went hunting and the popping of seven guns sounded like the 4th of July, tho it did not last long, for soon the collectors began getting their quotas and stopped.

I took two Wrentits, three Song Sparrows, one Yellow-throat, two Spotted Towhees, one Longtailed Chat, one Thrasher and one Anthony Towhee.

Birds were very common and I saw many Green-backed Goldfinches, Longtailed Chats, Cassin's Kingbirds, Least Vireos, Cliff Swallows, Yellow Warblers, Black-chinned Hummers, Anthony Towhees, Yellow-throats and of the more limited species observed were Nuttall Woodpeckers, Violet-Green Swallows, Brewer Blackbirds, Calif. Thrashers, Spotted ~~XXXXXX~~ both Grosbeaks and Towhees, rail. Flycatchers. John King came in with his second Western Flycatcher and Mr. Anthony killed an immature male Blue Grosbeak. This verified an observation I had made but could not be positive of when a peculiar brown bird flushed at long range from a weed patch. At the time I thought it to be a female Blue Grosbeak but would not be positive.

Mr. Gallegos sent a note back to San Telmo this morning by the truck driver to be telephoned to Mr. Gomez Farias asking for rope and horseshoes to complete the outfit and the small Ford was sent back to bring them.

I set six gopher traps this morning in the meadow nearby. Gopher workings were abundant and during the day 5 specimens were taken.

This evening I set another line of traps thru the willows & several fine, well-used runways were found. Upon close scrutiny I located a few nests of *Microtus*. They were situated on the surface of the ground near the base of willow bushes and composed of shredded dry

grasses. One nest opened was quite warm to the touch but the occupant escaped without being observed. They all had a very musky odor, were round in shape and about the same size, 6 or seven inches in diameter.

The traps left during the day were untouched.

This evening Mr. Anthony set his line of traps thru the willows to the west and a few on the dry brush-covered banks above the willow bottom.

Mr. Morra brought in a Calif. Poorwill so badly blown up that it could not be used for a specimen.

June 6th 1923

My traps held only a single *Reithrodontomys* with a broken skull, so I left this line out in hopes of diurnal activities.

The gopher traps held a single specimen and I packed them all up.

Mr. Anthony's traps in the willows were empty but his short line on the dry ground held one *Dipodomys* and one *Peromyscus m. sonoriensis*. I was rather surprised to hear of *Dipos* in this canyon and will string out my long line farther this evening.

We all went hunting again this morning and collected the usual run of specimens.

I looked at my willow bottom mouse traps about 10 a.m. and to my delight found two fine *Microtus* had been taken.

Several Violet-green Swallows were seen flying over the meadow and one flew close enough to me to be shot.

The day was glorious with just enough breeze to make the air comfortable and not too breezy to skin.

The pack outfit came in about 2:30 with the three packers and the meadow seemed full of horses and burros - 11 horses and ten burros. The three packers spent the rest of the afternoon getting the gear in order for the start tomorrow.

This evening we sat our trap lines over the dry brushy area near the creek where Mr. Anthony had captured his *Dipo* last evening.

I ran part of my line thru this locality and then set up over a rocky cactus covered hillside.

As we were going out to set the traps a Calif. Poorwill flew past in the late dusky light. I shot at it but did not kill.

I then spent an hour with Dr. VanD. and Mr. Slevin hunting frogs along the creek with my lantern. Our success was very limited as we only captured one small tree toad Hyla regilla.

June 7th 1923

My traps held two *Dipodomys*, 8 *Perognathus* (2 species), two *Peromyscus e. fruticulus* and 1 *Reithrodontomys*. The *Perognathus* were scattered all thru my line and while the *Reithrodontomys* was the only thing taken in the two short lines set in the willows.

I left one short line in the willows in case we didn't get off today as the Ford hadn't shown up from Ensenada yet with the rope etc. tho it came in at breakfast time. When preparations began to develop I hastily gathered up the traps.

Mr. Anthony caught 1 *Dipodomys* and two *Perognathus m. sonoriensis* and John King caught 1 *Peromyscus m. sonoriensis*.

While they were packing the outfit I put up the two *Dipos*. and 1 of the *Perognathus*.

The packing proved a great problem consuming considerable time and when the last few animals were brought in for loading it looked as if part of our stuff would have to be left as there were not enough burros to carry it all.

This proved the situation and Mr. Gallegos tried to make a deal with the Mexican on whose ranch we were camping for more animals but he proved so unreasonable that Mr. Gallegos ~~declined to accept~~ declined to accept. The fellow further proved his grasping nature when he made a charge of 10.00 for the cooking of a few meals during the past few days. This was paid under protest which lasted over an hour with expostulations in Spanish the tenor of which conveyed the thought of heat.

The animals were all loaded by noon and we put out leaving about 4 burro loads which included my collecting chest and many other necessary articles.

Our trail led up a steep canyon and out onto the tops of the hills. The packs began to give trouble which continued intermittently all thru the journey.

On the hill top we hit the old wagon road which ran to the old Socorro Placer Mine near the base of the Sierra San Pedro Martir.

The flora proved interesting for as we gained latitude the chaparral changed from agave to manzanita and admostoma.

Fires had left their scars everywhere and in some places the hills were entirely denuded.

After about six miles of travel we came into a sage belt with an occasional juniper. This region was composed of disintegrated granite and greatly resembled the Jacumba region in San Diego County.

San Jose was reached about 4:30 and a beautiful place it proved to be, situated near a large stream of cool clean water which flowed thru one of the finest Willow-Cottonwood associations I had ever seen. Birds were abundant and all the species which abound in river bottoms in this region were present.

Camp was established under a couple of Cottonwood trees near the ranch house.

We tried to find some extra burros and send our packer out to a neighboring ranch to see what he could do. He returned about dark accompanied by a prospector who owned the needed animals and arrangements were made for this man to backtrack to Las Cabras and bring on the articles left behind while we waited his arrival on the morrow.

I had the most complete outfit in the party - as Mr. Anthony's traps and ammunition had both been left behind so in order to give all a square deal I hauled out all my nine traps and with Anthony's help set them out with the understanding that the proceeds would be equally divided - three ways.

We looked the line over by lantern light and had a great time catching a live *Dipodomys* which had been blinded by the light. The traps held 4 *Dipos* and a single *Peromyscus m. sonoriensis*.

Returning to camp Mr. Slevin picked up a fine specimen of snake - Arizona elegans.

June 8th 1923

The traps held 10 *Dipodomys*, six *Peromyscus m. sonoriensis* and a single *Oryzomys*.

The latter specimen I claimed as owner of the traps.

Mr. Anthony went out with his gun as he had found a half dozen aux shells in his pockets and returned with 2 Songsparrows and a Nuttall Woodpecker.

I wrote notes - bathed and rested from yesterday's efforts.

John King went down to the barn and inspected a dozen Cliff Swallow nests. One nest he found a House Wren had preempted and had built the customary type of stick-feather lined nest which contained 2 fresh eggs.

The prospector showed up about dark this evening and I sat down to finish up the skins I had left behind at Las Cabras. The job lasted until midnight with the results of eleven more skins to the good.

June 9th 1923

We were all astir by 4 a.m. and the packers started to load while Mr. Gallegos cooked breakfast. The loading was not as difficult as day before yesterday but took a great deal of time to balance and lash properly anyway.

We made our departure at 8:20 crossing the river bottom north of the ranch. The burros started to give trouble as soon as the high bush was reached for some one burro was always trying to sneak out of the line and lay down. Several times the vaqueros were riding swiftly here & there trying to locate a straying pack-animal and when the delinquent beast was found it received a severe lashing for the trouble it had caused.

Our route ran thru the same type of sage agave country crossed when nearing San Jose, but after an hour's travel and a rise of about a thousand feet in latitude the adenostoma belt was reached. All along the way Dipodomys sign was abundant.

The road was gradually working eastward and upward but wandered about zig-zaging north and south a good deal.

Towards the south and very near our trail a large fire was burning in the chaparral. Fires of this sort are very common and much evidence of their destruction was visible. Some places I saw miles of denuded hill-sides with nothing but charred stems where a heavy stand of chaparral had once been growing. It seems a shame that such rampant vandalism should prevail but they seem to take it as a matter of course in this country, regardless of what results might occur if a heavy rainfall should come.

Birds were rare and I believe this feature to be caused by the continual firing of the brush.

About two in the afternoon we reached the old abandoned placer mines of Socorro and a half mile beyond the deserted buildings the burros gave considerable trouble. The beast that was carrying my boxes began to shirk by jumping and prancing, trying every considerable burro trick to dump the pack - and as a last chance it ran into the dense brush and laid down. This caused no end of trouble for as soon as the outfit stopped several more burros laid down and we were hung up here about half an hour. Finally the packers unpacked the troublesome animal and put the load on a pack horse which was carrying their beds and turned the burro loose. The stubborn donkey let out a bray of joy, turned his head towards home and was seen no more.

The even track of the wagon road ended at Socorro and now the trail began to ascend the hills at a sharp angle zig-zaging up - up - up.

We were all beginning to tire of the journey and someone of us was always asking how much farther to La Joya which was to be our camp for the night and the response of the guide was always a hand stretched towards the distant mountain and the words "Poco tempo".

The brush began to change and soon we were into a mixed growth of Artemesia and Manzanita and on the mountain sides not a great distance away live oaks were visible.

The first tree passed was a spear of Pinyon Pine which had 5 leaves to the quill instead of the single one as in the Pinyons of Nevada. In one small valley thru which we passed a scattered forest of these pines was growing. These trees were beautiful & symmetrical, growing to a height of about 50 ft at full maturity. The cones were small but the guide informed us that large crops of nuts were gathered at times from this tree.

Our trail seemed never ending but about 5 p.m. we crossed the first small stream where both man and beast quenched their thirst and proceeded the short remaining distance of about half a mile to La Joya, where we spent the night.

This place proved to be a small meadow of about three acres with several springs of fine cold water nearby and was surrounded by fine large live oaks with an occasional Western Yellow Pine. It was indeed a glorious spot and I should have liked to spend several days here - for birds were abundant and much mammal sign was in evidence. The meadow was burrowed every where with gophers and a damp grassy marsh nearby looked very fine for shrews and Meadow Mice.

I set a good line of traps thru this damp meadow and about the scrub willows near the small stream which ran from the springs. And while setting them I collected a Bluebird and a Calif, Jay.

Mr. Anthony and John also set their traps nearby.

Dr. Vandenberg while out after buzzards ran into a California Poorwill hovering two nearly fresh eggs - a rare find for him!

About dusk many bats were seen flying about and by good fortune I dropped two Eptesicus.

I put up a few skins this evening and about 9:30 looked over my traps. A fair catch had already been taken, 1 immature Neotoma, two Peromyscus and three Microtus. The latter animals proved a pleasant surprise.

Many Poorwills were heard calling after dusk and the call of a Screech Owl was heard in the distance.

June 10th 1923

My traps held several more *Peromyscus m. sonoriensis* another *Peromyscus rowleyi*, two *Reithrodontomys* and two more *Microtus*. In all I had a splendid catch.

Mr. Anthony caught a single *Peromyscus m. sonoriensis* while John drew a blank. While Mr. Anthony was picking up his traps he collected two Mt. Quail.

The packers did not have so much trouble getting loaded this morning and we were on our way about eight o'clock.

The trail led down a long narrow canyon where a nice rippling stream was rushing over the rocks. Willows grew dense along the water course and on the banks at either side of the creek large live oaks and Yellow Pines were growing while the hillsides were heavily clothed in a dense cover of Manzanitas. The Yellow Pines were heavily scarred with California Woodpecker work and a couple of the birds were seen but apparently the past few seasons have been poor for acorns and the holes in the pines were empty.

Valley Quail were abundant and near several large dead pine stubs colonies of Violet-green Swallows and Purple Martins were observed while over the crests of the nearest hills a pair of Western Redtailed Hawks circled about watching the caravan find its way amid the dust laden air caused by the scuffling feet of the 27 animals.

After passing down this canyon a couple of miles we crossed the stream and turned uphill over a Manzanita covered mountain side. This was the steepest trail so far encountered and the burros all wanted to turn back or quit but the packers pushed them on with voice and lash, and at times I thought the animals must have taxed their utmost strength, so steep was the incline.

After an hour and a half of this steep climbing we entered a beautiful narrow valley which was well forested with Yellow Pines and a clear stream of water gurgled thru the center. We had our lunch here while the pack train was driven on by the three packers, later they were overtaken a mile or so up the valley where we found them busily adjusting some slipping packs.

Turning east we climbed over a very rocky divide. The trail was extremely difficult here and in some places considerable trouble was encountered where the large boulders were so close together that the loaded animals could only squeeze thru. Several miles of this rocky sparsely forested Manzanita-covered ground was graveled and several places were seen where some vandal



had deliberately set fire to the forest, destroying large areas. This seems to be a prevailing custom in Lower California as evidenced by several fires in progress, seen these last two days and the damage to the watershed is almost unbelievable.

As we came out on a rocky bench a faraway glimpse was had of La Grulla, our destination, and I believe a general sigh of relief was breathed by everyone as we were all beginning to feel the effects of the two strenuous days in the saddle.

The view was one of beauty, as from the vantage point we looked over the tops of a huge forest of pines, into a large green meadow amid the trees and to the extreme east, ragged boulder-covered granite peaks formed the horizon.

Birds began to appear and near a rushing stream several juncos were seen and many brilliant San Pedro Bluebirds were seen thru the forest.

Arriving at the meadow we found hundreds of cattle had gnawed the grass down to its very roots and in a small stream a small flock of ducks were seen but we were not able to get close enough to properly identify them.

In the center of the meadow or park, we found a small chain of shallow lakes and in the most western one large patches of tule were growing and several coots were seen with newly hatched young nearby.

Many Brewer Blackbirds were found over the meadow and the voice of a Killdeer was heard, shrilly proclaiming our coming.

The pack train had proceeded us a half mile or so and we caught up with it near a small cabin and corral, where the vaqueros tending the cattle lived.

Deciding this to be unsuited for our purposes as a camp, we drove on towards the eastern end of the valley and as we passed the eastern lake a Duckhawk winged its way past us, close enough for positive identity.

The eastern part of the meadow was also overstocked and as a result, very poor for collecting the gopher sign was abundant.

About two miles east of the cabins we came to a small stream of fine clear water which had its source some three or four miles farther east in La Encantada meadow. A camp site was chosen in the tree belt a half mile back from the main La Grulla meadow and all of us went to

work adjusting camp, fixing our beds for the night and after a hearty meal Mr. Anthony and I set out our mouse traps. He took one side of the creek for a trapping ground and I the other. I set out only about a dozen traps, placing them carefully in runways of *Microtus*, which I found in the small clumps of Willow. While setting my traps I found a Junco's nest with 3 pipped eggs situated on the ground in a small thicket & I shot a chipmunk, two Juncos, a Blackthroated Grey Warbler and a Western House Wren.

These wrens were not uncommon here and several were seen this evening.

Several bats were seen flying about in the late dusk and I tried to shoot some of them but failed to hit them.

June 11th 1923

My traps held a single *Microtus* and on a short hunt before breakfast I collected two Pinyon Jays from a large flock scattered thru the pines. Two Juncos, two Whitehaped Nuthatches and a Violet-green Swallow.

Birds were not abundant and I prophesy many hard days of work ahead if I am to be successful in getting all the material I desire in the time I have to spend here.

Mr. Anthony's traps held nothing as did John King's.

We all helped get camp fixed up this morning, pitching tents and putting our supplies and belongings under cover.

The Mexican guides built a small brush covered Wickyup for a dining room where we could be protected at noon time from the torrid sun.

After the work was over I sat down to finish up my skins taken yesterday and Mr. Anthony, John King and the Mexican boy named Hielda went hunting. They returned later with four kills, the best of which was a chickaree taken by Hielda and two Cabrines Woodpeckers by Anthony.

About 3:30 the two older guides Rubino and Natcha went deer hunting and to the surprise of all returned in about an hour and a half with two fine bucks. The animals' horns were about 5 inches long and still in the velvet and, according to Mexican huntsman fashion had their throats cut. One of them was absolutely ruined for a specimen as Natcha had ripped its neck from ear to ear, almost decapitating the deer & had even cut a large gush in an ear with his huge 12 inch knife, which he wore tucked inside his trousers, with only part of the hilt projecting.

I rebaited my traps this evening while Mr. Anthony set out about thirty more traps. After dinner I wrote notes until nearly eleven p.m.

June 12th 1923

My traps were empty and Anthony captured 4 *Peromyscus m. sonoriensis* and to my surprise the tail of a *Perognathus*!

I went on a short hunt before breakfast and had two chance shots at a Vabrines Woodpecker but did not hit it tho I followed it nearly a mile before it finally eluded me in the forest. Birds were very scarce and only after a great deal of stalking did I pick up two White-naped Nuthatches and an immature male Martin. As I was pursuing the Woodpecker I saw an adult ♀ Sparrow Hawk perched on the top of a pine tree nearby.

After breakfast I had a horse saddled and rode up the creek about three miles to La Encantaro Meadow.

Enroute I saw a fine big buck watched me pass at about 75 yards distance, flopping his ears as it stood in the shade of a pine tree.

Birds were very scarce here and only after a great deal of work did I get enough to keep me going for the day. Near the creek I saw four Green-beaded Goldfinches but they were too wild for a shot. The kill included three Juncos, four Bluebirds, one Mountain Chickadee, one *Empidonax*, one Western Woodpecker, one Rock Wren, one white-naped Nuthatch and two Calamis Woodpeckers. The latter two were taken by good fortune as I happened to come upon them while riding thru the woods. The same good fortune befell me when I collected a Chickadee on the way home near La Grulla, and when nearly at camp I shot another *Empodomax*.

Mr. Anthony had been busy with yesterday's kill but finished before trapsetting time and went out on a short hunt getting a few common birds, the best of which was a male Pine Siskin.

In the afternoon when we were all busy Heilida called "Birdie" and we all rushed out from under the cypress tree where we were working and had the pleasure to see a large adult Condor soaring high overhead, tho not so far away but that the white undermarkings of his wings were plainly visible.

This evening I set all my traps marking two lines of them in different associations. One string was set thru the sparse brush near the rocks and the ones set for *Microtus* had another 15 added.

This evening, when Mr. Slevin returned from his daily *lizard* ~~lizard~~ hunt he brought in a fine specimen of Perognathus which he had taken out of Mr. Anthony's traps. When Anthony tried to skin this specimen later it was found to be spoiled, evidently the trap containing the specimen had been over-looked this morning when we went over the trap line.

This evening I was successful in collecting a single bat tho many shots were fired at the elusive animals.

Hielda brought in another one of the rare Chickarees this afternoon.

June 13th 1923

My traps held three Microtus and a Perognathus - all of which were taken in traps set near the stream amongst the rose and willow thickets. The sets in the brush near the rocks were untouched.

Mr. Anthony's traps contained only four Peromyscus m. sonoriensis and he was rather perplexed at my success with the Microtus.

I stayed in camp all day skinning the material left from yesterday's hunt.

John had carelessly left the deer skull on the ground near the skinning tree yesterday and this morning it was missing, evidently some stray dog had a square meal at John's expense!

Mr. Anthony went hunting and was successful in taking a Chickaree, with several other specimens of birds.

I set all my traps near the creek this evening and as I neared the end of the sack of traps I heard a Woodpecker drumming nearby so set out in pursuit. I had poor luck and took a chance shot at him as he flew at long range - needless to say I did not get the specimen but on returning the time spent chasing the Woodpecker had not been lost for on looking over my recently set trap line I took out four Microtus.

We all shot at bats this evening and I was fortunate in collecting a topotype specimen of Epescicus fuscus fuscus a species I much desired from this location and a small Mycrotus which I could not find in the dark but left my handkerchief as a marker so I could find the specimen in the morning.

As we were watching for bats a Horned Owl was seen perched ~~on a dead pine tree in the middle of the meadow.~~

I sat up until nearly midnight, getting up a few more skins, reading a bit in Nelson's Lower Calif. report and catching up to date with my notes.

June 14th 1923

My traps held one *Microtus*, one *Peromyscus t. martiensis*, two *Peromyscus* in the line near the creek and two *Perognathus* and another *Peromyscus t. martiensis* in the line set thru the manzanita on the rocky hillsides.

As we were all sitting down to breakfast I chanced to see a Chickaree running over the rocks near camp, tho at first I only thought it to be a chipmunk and did not recognize it until ready to shoot.

After breakfast I went hunting and passed the place where I shot my bats last night. The specimen was found several feet from the marker where I thought it had fallen.

I skirted the meadow towards the west from camp keeping a sharp watch for more Chickarees thru the pine forest but did not find another. I collected a few Bluebirds and Juncos and saw several Calif. Purple Finches of which only one was collected.

Pinyon Jays were abundant and spoiled the collecting until I was able to get in front of the flock.

Several Chipmunks were seen and I had to resort to shooting them with 12 gauge loads as they were so shy that it was almost impossible to get within auxillary range.

Near camp I shot a ♂ Costa Hummer. The species dit not belong here as a nesting breed and must have come up on a lateral post breeding migration as many birds in the Sierra Nevada in California.

Mr. Anthony went hunting in the mid-afternoon and returned an hour or so later in a much disgusted mood as he had missed an adult ♂ Zone-tailed Hawk. He had found birds scarce & had only a Violet-green Swallow and a Bluebird.

This evening I helped him set his traps as he had been catching nothing for the past few days on his side of the creek and I had been getting good stuff, like *Microtus* and *Perognathus* on my side, tho there was apparently no difference in choice or vegetation.

I had kept the *Microtus* traps out during the day and when they were examined this evening another specimen had been taken. The rest of the line was strung up a rocky manzanita covered gulch and while setting them an adult *Microtus* was taken. In setting traps I shot

Dr. VanDenberg had been collecting down near the lakes today and came in with three adult Baldpate chicks in very worn plumage. He says he counted 49 in the flock he saw upon examination of the specimens in camp I found them to be non-breeders. Killdeer were also abundant as were Brewers Blackbirds.

John cried most of the afternoon sobbing and sobbing as he skinned at his specimens. He said he was homesick and wanted to go home. Poor kid.

June 15th 1923

My whole line of traps held but a single Peromyscus t. martirensis and Anthony's held two Neotoma f. *see p. 77* and a single P. t. martirensis. *Granite Creek*  
*copy*

While picking up my traps I heard the 'pecko-pecking' of a Woodpecker nearby and by cautiously keeping behind boulders I was able to approach the birds unseen. The report of the gun aroused the curiosity of a Chickaree in the next tree and it set up a chatter which proved to be his undoing and soon I had two capital specimens for the collection.

I scouted about a short time picking up another ♂ Blue-bird and another Chipmunk, further hunting was not needed as I had a number of specimens left over from yesterday.

After lunch today I noticed a gopher popping its head out of its hole nearby and I tried snaring it with a loop of fine wire, but the fun soon wore off as the minutes passed and I set a trap in the hole instead to save my valuable time and went back to my work. I looked at the trap an hour later and found the gopher had been taken. I thus set about half a dozen traps in as many fresh holes and about sundown four more specimens had been collected. The traps were then reset in fresh burrows. When returning from setting the traps in mid-afternoon a White-naped Nuthatcher flew to a tree near me and throwing my gopher spoon at it succeeded in collecting the specimen the first throw.

In the middle of the afternoon John called my attention to a peculiar bird close overhead where we were working and looking up I saw a fine ♂ zone-tailed Hawk within gun range. Unfortunately my gun was not nearby for Mr. Gallegos had been off with it and when it was returned I had failed to load it up & place it near by. However, I lost no time in getting it within reach but the hawk did not return. Later an adult Golden Eagle flew over very high up tho within eye range for positive identification.

I set my traps up a draw in which a great many manzanitas

Mr. Gallegos and Heilda went hunting about noon today and returned with an adult ♂ Red-tailed Hawk, two Cabanis Woodpeckers and a Chipmunk.

Later, Heilda went hunting again and returned with a nice Mt. Quail.

Anthony was out hunting this afternoon and collected another Siskin with several other common birds.

June 16th 1923

My mouse traps held but a single *Peromyscus t. marteriensis* and a House Wren proved a great disappointment. Anthony had fared the same fate and it seemed to be almost hopeless to get a good catch here.

John had set his 10 traps nearby and he had come out with me this morning to pick them up so when all the traps were sacked I went to camp with him and went hunting.

Near the hills on the south side of the valley I found a few Mountain Quail and collected two specimens. Returning to camp several other birds were taken including three ♂ Bluebirds, three Juncos and a Chickadee.

The gopher traps held four specimens and were reset.

Many Flickers were seen on the meadow this morning.

Anthony had a run of luck today when the ♂ Zone-tailed Hawk which had been seen about the trees during the past two days, flew over within range and was collected. He also brought in a bunch of small birds & amongst them was a young Chickadee just out of the nest.

Mr. Gallegos had several of his guides out hunting today after Mt. quail and Natcho brought in one, shot to pieces. Heilda brought in a good variety including one Slender-billed Nuthatch, one Black-throated gray Warbler, one ♂ Purple Martin, one ♀ Cabanis Woodpecker and three Mt. Quail. The latter were one adult and two 5 day old chicks on which the tiny top notches were showing at this early age.

When going out to set my traps this evening I saw a limb high up a pink tiny wiggle and keeping my eye on the branch forded the creek walking cautiously until within gun range. To my pleasant surprise down came a fine Chickaree. The animal had been feeding on the pollen buds of the pines for its face & lips were yellow with the dust.

the traps my attention was attracted by a peculiar noise and I immediately retracted my steps a rod or so after the gun for I had left it at the beginning at the trap line.

I then searched about for the source of the noise but saw nothing and placed the gun down again near a rock some distance ahead of the trap line and upon returning saw a Chickaree on a limb of an old rotten stump about 25 ft high. I immediately backed up for the gun again but the animal became frightened and sought shelter in a hole near the top. I watched the creature for about ten minutes with no results and then decided to try again and push the thing over, as it looked very rotten. I worked some time straining and pushing with no results tho by getting the stump to sway to and fro I could hear it crack & snap continually but I couldn't get enough purchase to shove it down.

When I first started a motion on the stump the Chickaree sought shelter in a large hole a few feet below his first hiding place and all the shaking I did afterwards failed to drive him from this hole. I think it quite probable that the beast has a nest of young in the stump and shall cut it down tomorrow and search the holes.

Mr. Slevin brought in a nice Mt. Quail this evening and presented it to Mr. Gallegos. He reported seeing many of these birds as he was returning to camp from Alcatraz which is about 3 miles south.

John was again on the crying bit this afternoon and even we seem to be losing patience with him. I am very sorry as I had great hopes in the boy's possibilities.

June 17th 1923

The first thing this morning was to chop down the rotten stump and I succeeded in accomplishing this feat in about 10 minutes with my keen little hatchet.

The stump fell with a crash and broke up into many pieces on the rocks. And tho I kept a very sharp watch I did not see the Chickaree leave the log. However, I chanced to see it skinning up a nearby pile of boulders and shot the beast. It proved to be a male and further search of the log for young was unnecessary.

I had noticed a pair of White-naped Nuthatches about the tree and upon examination of the stump I found the nest and five eggs had been thrown against the rock and broken when the stump fell. A Western House Wren had her nest in a cavity near the ground. It contained 3 pipped eggs and two new-hatched young which also were destroyed.



My traps were rather disappointing and held but two Peromyscus m. sonoriensis, two Peromyscus t. martirensis and 1 Perognathus. The latter specimen was caught across the skull and ruined tho I saved the skin without the skull.

After breakfast Anthony and I went hunting under the guidance of Mr. Slevin who had been seeing Mt. Quail each evening for several days past as he was returning from the Alcatraz County to the south of the camp.

As we were preparing to start a Duckhawk sped past going downstream and was seen a few minutes later alighting in a large tree far out of gun range.

Our success was very limited and by the time we met again in the Alcatraz meadow, but four birds each had been taken.

~~Near~~ <sup>Near</sup> the spring Anthony had killed a couple of Calif. Jays. These birds were probably up from the lower limbs or a post breeding lateral migration.

On the way home he killed another ♂ Cabrinus Woodpecker and saw a small bunch of Mt. Quail but did not have a good chance to shoot at them.

As we were crossing the meadows we each picked up a bunch of common stuff which included Bluebirds, Juncos etc. Swallows were very numerous over the meadow today and I saw very many Cliff Swallows in company with the Violet-greens.

On our return to camp I found that one of the guides had at last been able to surprise the lone Jackrabbit which lived south of camp. It had been seen many times but always too far away to kill and from all I could find out the only Jackrabbit in the valley.

↑ John who was the only man left in camp reported another ♂ Zone-tailed Hawk about. About sunset Rufino came in with another deer. The feet had been cut off spoiling it for a specimen.

I set my traps this evening over a boulder-manzanita covered hillside about ¼ mile east of camp. I was very late in setting them and could not pick a fine place. Anthony had pulled in all his mouse traps set thru the thicket the last week without results and as I passed the lea on my way to camp I set three mouse traps in some runways thru the bushes in which he had been trapping.

June 18th 1923

disappointment for but two

as it lay dead in the trap and nearly minced it.

After getting my traps in I shot a Chipmunk in a pile of rocks in the hillside and while resting from the climb as I packed up the animal I heard Mt. Quail on the opposite hillside.

One bird was seen between two bushes and after going thru a few moments to get into more open ground I set off in pursuit getting to the top of the hill I found a single Quail near a bush and shot at it, but missed. As soon as I again had the gun loaded a second Quail appeared and was collected. Just as the gun went off one other Quail flushed nearby and lit near a pile of rocks a short distance away. I followed the bird and after a short stalk saw it under a bush in nice range - imagine my surprise to find three Quail instead of only one when picking it up!

I had a good deal of work so spent the rest of the day skinning.

Anthony went hunting after breakfast and returned about 10 a.m. with a few Bluebirds and two Quail. He reported finding two small bunches of adults.

It has been my observations that but very few Quail are nesting in this region this year, both Valley & Mountain and I believe this phenomenon to be caused by drought.

Heilda went hunting this afternoon for Mr. Gallegos and returned about four p.m. with 8 or 9 birds which he had shot near La Encantado. Indeed in the lot was a Calif. Horned Lark, a Slender-billed nuthatch and a female Cabanis Woodpecker.

I set my traps about 1½ miles east of camp this evening in a beautiful little green valley.

The place appeared fine for mammals and I covered it well. Microtus sign was abundant in the luxuriant grass and part of the line was placed in their runways. The valley ran from east to west and slope exposure was well illustrated here for the north side or south exposure was wholly manzanita growing very dense while the south side or north exposure had ceanothus and scrub oak with but a little manzanita. A rather scattered growth of pines Ponderosa was growing on the valley floor and over the north exposure. During early spring a small stream ran down the center of the valley but it was all dried up at this date, tho the green verdant grass showed signs of a great deal of moisture near the surface.

... deer sign was in evidence and nearby a fine place

As I was returning to camp at sunset I shot another Cabrinus Woodpecker and three more Mt. Quail from another small bunch of adults.

June 19th 1923

As I was going up to pick up my traps just after sunrise this morning I found a bunch of Mt. Quail nearby and managed by stalking, to get 10 of their number before they were all separated.

The scattered birds were soon calling from nearly every large rock and while I was picking up the ones slain a ♂ Cabanis Woodpecker flew to a nearby dead tree and was collected.

Near the small spring a short distance from the beginning of my trap line I ran into another bunch of Mt. Quail and killed five more. One of which was shot on the top of a very large round boulder and proved very difficult to retrieve.

The traps set on the north slope on south side of the canyon held but a single chipmunk which had been caught since sunrise, while those on the north side on south exposure held one House Wren, 1 Peromyscus t. martiensis 2 Peromyscus m. sonoriensis and one Perognathus, the latter was taken in the very last trap.

The meadow traps held a surprise in the shape of a Sorex, but were disappointing in meadow mice tho I have little doubt but that a good number could have been taken had I left the traps out during the day. However, the distance from camp prohibited this expedition. The only other mammal in the meadow sets was an immature Peromyscus t. martiensis which had wandered from his home amongst the chaparral.

On the way to camp I shot an adult Spotted Towhee, another Bluebird and a Calif. Jay.

I had enough work to last me all day so I did not stir from camp until trap time this evening.

While at work this afternoon John King called my attention to a peculiar bird perched in a tree nearby and on flushing it I identified an adult Clarks Nutcracker.

I set my traps again in the same locality as last night but set more in the meadow and all the rest on the north slope or south exposure.

five days, I have heard and seen these birds in the willows near the stream and thru the woods, whether they nest up here or not is a matter of conjecture for I saw no evidence of young birds tho at other localities of similar conditions I have known them to nest abundantly.

Mr. Anthony set his traps in the canyon a short distance west of my line.

June 20th 1923

My traps proved a failure and the whole line held but 1 *Peromyscus t. marteriensis* and one *Peromyscus m. sonoriensis*. Mr. Anthony shared the same fate and we both determined to try for better trapping ground.

I still had a lot of Mt. Quail to work on so stayed in camp.

This afternoon Dr. VanDenburgh reported that he had found the nest of a Lower Calif. Flycatcher a half mile up the creek.

In the middle of the afternoon I had two chance shots at a Cabranis Woodpecker near camp but did not get the specimen.

During the day Mr. Morra shot a Mt. Quail near camp and reported that it was the parent of a brood of young. This was the second instance of a family of these birds reported and upon description the bird proved to be a ♂ for which I was very glad as the young will still have the female to care for them.

This evening I set about 30 traps north east of camp. The ground did not look very good but I hoped that a *Perognathus* might be taken there.

Anthony set his line south east of camp skirting the manzanita thickets amongst the pines.

June 21st 1923

My traps held two *Peromyscus m. sonoriensis*, a very disappointing catch and while picking them up I killed my sixth Chickaree as it ran out on a boulder near me. As I was coming to camp I shot a Chipmunk, an *Empidonax* and a young Costa Hummer. The hummer had probably come up from below as it was perfectly able to care for itself.

This Chipmunk proved to be another female in the state of lactation as have all the ~~been~~ which were collected during the past week. This would indicate that the young ~~signature has been~~

Mr. Anthony's traps carried off all honors this morning when he captured two *Peromyscus t. marteriensis*, three *P. m. sonoriensis*, one *Perognathus* and a *Dipodomys*. This latter specimen was a prize indeed and I shall get in on his region tonight for it will be the last chance to trap in La Grulla for tomorrow we move to La Joya.

I still had some Mt. Quail to work on so put the morning in without any more hunting.

After lunch I spent a couple of hours photographing snakes, frogs and lizards for Dr. VanDenburgh and then went up the stream with him to his Flycatcher nest.

It was a beautiful structure placed about 18 inches above the ground in a niche of the bark on the north side of a large pine tree. The bird was very tame and if I had more time I could've made some fine photos of her. However, I contented myself with a nest photo in situ.

Returning to camp I found Mr. Anthony skinning a Jack-rabbit. This was the second of the species seen by me. He had shot it while setting his traps and also had taken a crack at a coyote but the beast was out of range for the four shot he had to use.

I set my traps thru the same country he had trapped in last night and after the evening work was over we went over our traps. His line held but a single *Peromyscus m. sonoriensis* while mine held two of the *Peromyscus* and a fine *Dipodomys*.

June 22nd 1923

We were all up very early this morning and John was out exceptionally prompt, usually being last.

My traps held held three *Peromyscus t. marteriensis* and a single *Perognathus*. These specimens were viscerated and packed because I did not have time to make them up this morning,

The packing and loading of the burros took a great deal of time this morning and it was 10:30 before we swung into the saddles and made off.

I hated to leave this place as it seemed only half done and I had not been around long enough to get the habitats of half the living creatures to be found. In fact during the 12 days of our stay I had ventured on but two excursions of more than a mile from camp. So very little of the place had been studied.

Riding westward thru the large green meadows Mr. Gallegos & I took many pictures of the scenery and near the lake a beautiful ♂ Zone-tailed Hawk flew overhead well within range, tho perfectly safe for my gun was packed away.

Many Red-tails were seen amid a great many ducks were on the small lake, most of which I took to be Baldpates, tho I could not get close enough to be certain.

The packs seemed to be unusually troublesome today and much time was lost when the entire caravan was halted to lash up one of the pack animals.

I was much amazed on one occasion when the old Mexican whom Mr. Anthony had called "Santa Claus" on account of his straggling whiskers, caught one delinquent burro, that had managed to shake its pack loose and then get off the trail into a large pile of boulders. After tightening up the pack he put his hands caressingly about the little animals neck & whispered into his ears some Spanish words regarding the right trail, pointing in the proper direction with his fingers extended. But as the burro started out it received a rather different admonition when the old fellow changed his mind regarding the burro's intentions and delivered a cutting sting with a doubled reata on the burro's rump.

As we were returning over the same trail on which we had entered the mountains a description of the route seems unnesseray, tho I was repeatedly surprised to find how really precipitous the trail had been for I was so tired of the long ride on June 10th that it had not impressed me.

When the highest divide was reached a wonderful view lay to the eastward with a small vista of La Grulla nestled amongst the Pine forest, guarded by the rock bound crag all about.

A fog bank obscured the view to the west and the effect was not pleasing in the afternoon sun.

We had our lunch near a fine large stream of water while the burros laid down and crashed about thru the trees, doing their best to loosen up the packs. Needless to say the time spent was as short as possible and we were soon again in the saddles.

As we left most of us took the lead, for we had been following the pack animals and were in a swirl of dust most of the way and in consequence had seen nothing of the bird or animal life to be found along the trail.

Passing down thru a long narrow valley called Vallecito Mr. Slevin noticed a Chickaree sitting on top of a large

boulder near the trail and Mr. Anthony, who was packing his gun, collected it.

Mt. Quail were abundant and many flocks were flushed as we passed along. This time in the afternoon seemed to be right to find them near the water for the heat of the day had passed and the birds were thirsty.

Near a small meadow many Bluebirds were seen but Juncos were entirely lacking, tho I had noted them commonly on the way up. The reason seemed obvious however, for after the young were able to fly they all went up to higher lands where food indication were better.

This lateral migration seems to prevail here the same as it does in the mountains further northward, for before leaving several species such as bushtits, spotted Towhees, Calif. Jays etc, were noticed and I felt positive that they had not been there when we arrived.

We pitched our camp under several large Yellow Pines in the fork of a canyon down which ran a tiny stream. This place was about 2 miles south of La Joya where we had spent the night of June 4th and the north fork of the canyon ran right up to the old camp.

A large stream of fine water flowed over the boulders in the canyon which ran from east to west and Natcho informed us that this was the Valladores Creek.

Willows bordered both streams and many Yellow Pines and Live oaks were growing all about while the nearby hills were heavily chaparralled with manzanita and addostoma where the soil permitted the great outcroppings of grey granite protruded giving them a mottled effect in the distance.

I set my tgraps thru the chaparral east of camp. The rocky character of the soil led me to believe that I would find Perognathus and at least three kinds of Peromyscus about.

June 23rd 1923

My traps held but three specimens, two of which were Perognathus a and one Peromyscus c. insignis. The numbers were discouraging tho the species was quite desirable.

After breakfast Anthony and I shouldered our trap sacks and walked back up the trail about half a mile to a small meadow where I thought Microtus could be taken.

The climb was very steep and it was hoped that many trips would not be needed to catch a fine series of the desired

I set about twenty-five traps in the moist part of the meadow and found runways abundant while Anthony kept to the drier parts with his line.

On the way to camp I picked up several birds including a Mt. Quail, a Spotted Towhee, a Berwick Wren and a couple of Calif. Jays.

About noon Anthony saddled a mule and rode up to look over the traps. After half an hour's absence he returned empty handed. Apparently at this warmer level these animals are not as diurnal as I had found them higher up.

About five o'clock this evening I shouldered the rest of my traps and walked up to the small meadow to look over the Microtus traps.

I found a specimen in each line and near by shot a ♂ Blackthroated grey Warbler and a Laguna Flycatcher.

The rest of the traps were strung out thru the manzanita nearby.

Anthony strung his line out near camp.

June 24th 1923

This morning Anthony, Mr. Gallegos and I all started up to look over the Microtus traps at sunrise.

On the way up I killed two Plain Titmice, the only desirable birds I saw and Anthony shot a Mt. Quail for Mr. Gallegos.

My Microtus traps held two Microtus, one Reithrodontomys and one Peromyscus m. sonoriensis, while Anthony's held but two immature Reithrodontomys. It was decided that the gain of this trap line was not worth the effort expended in securing the specimens obtained so I picked all the traps up.

My line in the manzanita held one Perognathus, one Peromyscus c. insignis and one immature Thomomys.

The latter specimen was very much of a surprise for it was taken well away from any burrow and apparently it had only blundered into the traps.

This animal looked so strange that I set out several traps about camp which during the day caught another immature specimen.



During the afternoon Anthony had walked up the north fork of the canyon and found a small sage covered flat which he thought looked very promising for small mammals so together we set all of our traps in this region this evening.

I had mine all out before he had finished and while scouting about near a small grove of pine trees I shot a pair of White-naped Nuthatches.

June 25th 1923

My mouse traps were entirely and absolutely untouched this morning while Anthony, s held but three specimens, one each of *Perognathus*, *Peromyscus c. insignis* and *Peromyscus m. sonoriensis*.

My gopher traps held a single specimen and I reset part of the traps.

After breakfast another gopher was taken, however this was the last for the day tho I looked the traps over several times.

I went hunting near camp and killed two Calif. Jays, a ♀ Blackthroated Grey Warbler, a Townsend Junco, a Plain Titmouse and a ♂ Pine Siskin.

Several new birds to the fauna were seen or heard, including many Bushtits, Western Warbling and lursine Vireos, Song Sparrows and saw what I believed to be a Cabanis Woodpecker which flushed from a tree nearby and was out of sight in a jiffy.

Anthony went hunting about noon and brought in but two birds, a ♂ Western Tanager and a ♂ Cabanis Woodpecker.

I set my traps this evening on the chaparral covered hillside north east of camp where I hoped to catch a few more *Perognathus*.

Anthony set his line 1 mile up the valley to the north. Part of his line was in a small green meadow and the rest thru the brush on the hillside.

While I was out with my traps Heildo brought in another ♂ W. Tanager and several Mt. Quail.

June 26th 1923

We were all out very early this morning for today was  
the day had been spent on the

a lark for we were on the way home now and every evening would find us nearer.

My traps held two *Peromyscus c. insignis*, one juv. *Perognathus* and 1 *Peromyscus e. fruticulus*. Unfortunately the latter specimen had been ruined by ants.

My gopher traps held one specimen and as I was returning to camp I came across the one Mr. Anthony had been trying to catch these past few days. The location was near camp so I determined to make a half hour try for the beast and stuck in a trap, placing it very deep into the burrow.

Returning in about an hour I was delighted to find a fine adult male had been taken and Anthony had spent 3 days on it without success. I viscerated all my specimens and packed them up, awaiting an opportunity to skin them on the next stop.

A fine early start was made with the pack train this morning and by 8 o'clock we were all in the saddles - Homeward Bound.

Our route led up canyon where after an hour's time we met Dr. VandenBergh who had preceded the cavalcade to search for a possible second set of Poorwill eggs, near the old campsite at La Joya. He had not been successful in his search for the Poorwills and handed me a Western Gnatcatcher which he had shot for identification.

The day was pleasantly warm and I enjoyed the journey tho the the sea coast was obscured by a heavy fog bank.

As the animals were passing down a heavily brush-covered draw, three of the burros managed to dodge into the brush without being observed by the packers & they were not missed until we were about half a mile further on. When their absence was discovered the rest of the packed animals were rounded up and left in charge of Heildo while Nacho and Rufino dashed madly back in search of the missing burros. It need not be described, tho it may well be mentioned, that a dissenting burro gets amply punished. The resulting shakeup to the cargo on its back notwithstanding, and after a half hour's delay the two packers returned with the delinquent burros, driving them with huge 10 ft. clubs - full speed ahead!

As we were nearing Socorro two ♂ white-throated Swifts were darting about nearby, giving a good exhibition of their marvelous speed.

We stopped at the old deserted Placer Mine for lunch and during the short stay we had ample time to observe ~~the vast area burned over on the north end of the mountains.~~

Trouble with the packs during the afternoon drive separated the party and about half of the pack animals with Dr. Vanden-Bergh in the lead, gained half an hour on the rest, and when we caught up with them about 4 p.m. near San José they had unloaded and prepared camp without orders, even tho we had planned to drive thru to Las Cabras in one day. This offense brought a harsh rebuke from Señor Gallegos and he and Rufino had a rather heated 10 minute talk.

After the evening meal Anthony and I set out all our traps placing them in one long line. Anthony had first choice of trapping ground and started in setting thru sage covered flat, ending up near the mouth of a ravine.

A fire, years ago, had denuded this area and a scathed annual growth, now all dried up, had taken the place of the brush. *Dipodomys* sign was abundant and I strung out my traps with expectations of a large catch.

We looked the lines over by lantern light, about 9 o'clock this evening and found only one *Peromyscus m. sonoriensis* in Anthony's line and 1 *Dipodomys* and three *Peromyscus m. sonoriensis* in my line.

The moon was full tonight and rose shortly after sunset, bathing the entire landscape in light so bright that the mountains 25 miles distant were plainly visible. This feature was directly responsible for the short catch as I have always found moonlight nights the poorest for trapping Rodentia.

June 27th 1923

We had the traps in early this morning, Anthony had but two more *Peromyscus* and I had 8 *Dipos* and 1 more *Peromyscus* - in all it was a rather disappointing catch for I especially desired *Perognathus* from this locality.

As the packs had not been disturbed we made a fine start and by 7 were all in the saddles, yelling "Burro".

An uneventful two and a half hours ride brought us to the old starting point - Las Cabras, where we had news of the truck awaiting us and the Pope-Hartford was packed. This car, to Dr. VandenBergh's displeasure had been drained of all the gasoline and the whereabouts of the thieves could not be determined.

After unsaddling we began separating the goods, again repacking them for transportation by automobile. This consumed a couple of hours after which Anthony, John and I

After getting up my skins I took some photos and bathed in the stream. Here I found Mr. Gallegos waiting for his clothes to dry. He had been out of camp all afternoon and we had commenced to wonder what had happened to him!

The truck arrived in midafternoon and after a few quite necessary repairs the loading commenced and by five o'clock this afternoon we were on our way.

As we were passing thru the open valley about 6 miles west of Las Cabras I had a fleeting glance of a small Citellus as it scurried into its hole near a bush. This sight was repeated down the valley a mile farther and an exclamation from John who was riding in the same car with me, proclaimed the sight of another. I questioned him carefully and found without doubt that he had seen the same species I had been seeing and which, as far as I know, this animal is unknown in this region, so with due care not to cause or arouse his curiosity, I asked him not to mention what he had seen to Anthony or any one, for I hope to get back during the summer for a week in this region.

Down the valley further I saw much evidence of the squirrels but no animals for it was almost sunset and they are active only during the heat of the day.

We arrived in San Telmo in the early evening and sleeping quarters were again found in the schoolhouse. However, before I had placed my bed on the floor I noticed hundreds of fleas and so withdrew, with Dr. VandenBergh to the road outside.

The village was all astir with excitement caused by our arrival and a dance was given in our honor.

So all of us excepting Slevin and Anthony spent the evening watching the dancers. There were but three girls

and about a dozen men so they didn't have to lose a chance to dance even tho it was held outdoors under a weeping willow tree with no floor but solid soil to dance upon - by the tune of a droning violin and a strumming guitar.

The party broke up about midnight and instead of going home where they should have gone, the musicians spent the rest of the night serenading the three maidens and keeping us all awake.

About three thirty this morning I was aroused from a nap by the arrival of two horsemen in camp.

The man introducing himself, said he had been riding all night to catch up with us, hoping that he might arrange

he would have to see the leader of the party for such arrangements and went back to my slumber.

June 28th 1923

Dawn found a mighty sleepy bunch but we turned out and after a great deal of delay were on our way.

Owing to several misunderstandings and some extraordinary measures taken by Rufino, it was necessary to take him with us to Esenada for payment, so, he with the man and boy who came into camp very early this morning, were put on the truck when we started.

When about 15 miles out of San Telmo, the V rods on the truck broke and I thought that we would have to camp there for some time but the part was exchanged with the touring car and we proceeded very cautiously for the thought of only defective parts to hold the front wheels in place gave no mental rest for the occupants of the car and I was one of them.

The crippled car had taken the load and tho we didn't hurry we soon left the truck and Dr. Vandenberg far in the rear, arriving in San Antonio del Mar before twelve o'clock.

Here temporary repairs were made and becoming uneasy about two o'clock I was about to send the Ford back to find out where the rest of the party were when VanDenberg rolled in. He stated that the truck was out of gas on a hill some three miles back so after lunch the Ford was sent back with fuel.

It was not until nearly five that our whole party was assembled again and after they had had a good meal, the truck was sent on ahead.

We caught up with them at San Vicente, and continued on into the night, pushing up the steep hills, for the truck was in very poor mechanical condition. Rufino and the passenger certainly earned their passage this night for when we camped near San Telmo, about midnight, they were pretty nearly all in.

While Anthony was putting up his cot near my bed a Dipodomys was seen out in the bright moonlight. The animal finally took refuge in a hole nearby and was seen no more.

We were all out very early this morning and I looked at the Dipodomys hole, finding it plugged up like a gopher.

The start was made without breakfast for as there no

We arrived in Ensenada about 9:30 and were busy separating the goods again, this time for ownership. Not having any way of transporting my stuff I left it and will return tomorrow with the truck .

Dr. VandenBergh pulled out for Tijuana about 1 p.m. and Mr. Gallegos, John and I left about 2 in Mr. Morra's Outland.

We arrived in San Diego about 8 p.m. and tho tired from the month,s trip were glad to be back

July 8th 1923

Mrs. Canfield and I drove out to Bonita in midafternoon after a few specimens for the Museum.

In the moist river bottom the unmistakable "Cluck Cluck" of a Calif. Cuckoo was heard and an industrious search followed. After a half hour's combing of the surrounding trees my attention was called to a bird in a willow which, on *collecting* proved to be the ♂ Cuckoo.

Mrs. Canfield discovered two nests, a Willow Goldfinch with four fresh eggs and a Black-chinned Hummer with two eggs, while I found a Yellowthroat's nest in the tules with four newly hatched young and an addled egg.

Later we drove up on to the Mesa where three Horned Larks were collected for the Taxidermist.

July 10th 1923

I left the municipal dock this morning at 9 a.m. on board the Patrol boat "Tecate" in company with Mr. Gallegos, Mr. Gordon and Mr. Anthony bound for a two weeks trip to Guadalupe Island.

We headed for the south island of the coronados group and as we passed the bell buoy just outside San Diego harbor, a low flying fish surged forth into the air from near the ship's bow. The sea was as calm as a pond and there was not a bit of wind making a wonderful day for a land's man to sail.

Our destination for the day was Ensenada, where we were to pick up Mr. Palacios, the government light house man who was also to make the trip with us and as we passed the island, Captain Angela set the course.

Near Descanso Point Mr. Anthony pointed out a bird flying past and said it was the New Zealand Shearwater.

We arrived at Ensenada about 6 p.m. without incident. Dinner was taken at the Chuck restaurant.

July 11th 1923

We were supposed to sail today about 10 p.m. and accordingly Mr. Palacios had his luggage on board ready to go, but Captain Angula had great difficulty in finding a ship's cook and we had to lay over until the morrow.

Mr. Anthony and I spent the day fishing, I catching several smelt some of which he used for line bait and with which he finally landed a small halibut.

In the early evening we all went on shore & set my traps over the brush covered hills near by.

Much brush rabbit sign was observed and many *Neotoma intermedia* traces were found amongst the rocks and cactus.

July 12th 1923

Mr. Anthony and I were out very early this morning picking up my traps which held 8 *Peromyscus c. frateranus*, three *Perognathus f. fallox*, two *Dipodomys a. simulans* and a *Reithrodontomys m. longicochus*.

A late breakfast was served on board ship this morning after which we started to prepare our skins on the after-deck. However, the sea breeze soon sent us below and we set up our chairs and table in the main cabin.

Not long after we were established Capt. Angela came aboard and the engines started, preparatory to our leaving. This created a stir of excitement, for at last the start was evident.

A good rigged skiff was taken on board and made fast, in place of the round bottomed tender, the anchor was drawn and made fast while the Capt. from the bridge sounded a ring of a gong in the engine room and the boat put out to sea. It was exactly 11 a.m. & we headed straight for Punta Banda where we set our course at 12.15. Mr. Anthony strung out his trolling line and the mate strung out the log while the boat seemed headed for the open sea.

About 10 miles from shore a whale was seen sporting in the water blowing what appeared to be jets of steam, tho it was only water shot skyward with a rush of air from the beast's lungs.

Black-vented Shearwaters were soon flying singly over the smooth sea and farther out Black and Socorro Petrels were not uncommon.

About four O'clock I chanced to look aft from the look-out of the pilot house where Mr. Anthony and I were spending most of the time, I saw a fish on the line and after a scramble Anthony pulled in a fine 15 lb albacore.

Towards evening a large ship passed astern and a couple of more Humpback Wahles were seen.

The boat was making good time and after dinner the crew settled down to short watches at the wheel, keeping the vessel in her course all thru the night.

July 13th 1923

Mr. Anthony and I were out very early this morning, hoping to catch an early glimpse of Guadalupe Island with the rising sun, but the fog banks were too heavy and only a leaden horizon on every side was to be seen.

Many of the white-rumped Keaching Petrels were seen this morning and, petrel-fashion followed the water of the ship a short distance in search of food, before continuing their course.

About 7:30 the obscure shape of the island was seen in the far distance. However, fog prevented a vision of the outline and only sheer cliffs were observed in the gray hazy distance.

A pair of Murrelets flushed from the path of the onrushing ship and another whale was observed some distance to the northward.

As the hours wore on the island began taking shape and about 10 o'clock we were near enough to begin to pick out landmarks and see the disheveled upended strata, which plainly showed the island's volcanic origin.

The blanket of fog hung about the island's crest obscuring the trees, a few of which are visible on clear days from the eastern shore according to Anthony tho I was quite impressed with the barren aspect presented on the parts of the island I could see. As we came nearer moving white and black objects were to be seen about the cliffs - goats! And they were everywhere. This was indeed the cause of the barrenness of the island!

The large two-story white adobe was discernable and soon we dropped anchor, a short distance offshore. While the 20 or 30 inhabitants (soldiers and their families) lined up outside their shanties to watch.

After the fog lifted there were but three visible trees on the skyline, all of them cypress and they proved the



About noon Mr. Anthony and I were landed thru the surf, taking our guns planing on a short hunt nearby.

The linnets were swarming about the houses and Rock Wrens were not uncommon.

We went up the rocky canyon back of the buildings finding nothing but Rock Wrens and the dead remains of dozens of goats in various stages of decomposition. This caused a terrible odor and I was informed later that the entire Island was in the same condition.

Later in the afternoon, when preparing skins on board ship I saw two Western Red-tailed Hawks flying high up on the mountain and a lone Western Gull hung about the rocks nearby looking for refuse that might be thrown overboard.

After dinner I lighted up the gas lantern hanging it up in the rigging with Anthony and several members of the crew watched for seabirds that might be attracted.

We didn't have long to wait for a fine Murrelet came whizzing in and I grabbed it at Mr. Gallegos' feet. Several Petrels followed, the first of which I caught in the handy butterfly net. Excitement ran high when a call from Poncho on the afterdeck proclaimed a big one - the bird fluttered forward and Anthony grabbed it finding it to be a Black-vented Shearwater. We had just been talking about this species and how they could bite, so when this bird was brought to me I stuck out my finger and found they really lived up to their very bad reputation for it drew blood the first nab.

About 10 p.m. things began to quiet down and it was decided to go below for we now had 1 Murrelet, 8 Petrels and a Shearwater, so I went up on the pilot house to draw in the lantern when to my astonishment I was struck in the middle by another Murrelet which I collected.

Many fish had been attracted to the surface by the bright light and just for fun Anthony and I tried our luck at catching a few. Our success was beyond expectations and about 20 large blue smelt were landed while a couple of bass were hooked but not captured. This was unique fishing in the ocean by lamp light! And as a parting of a most momentous day we heard the KVVU wireless concert from Los Angeles at eleven p.m. Thus ended the first day at Guadalupe.

July 14th 1923

Mr. Gallegos wanted to climb the island today and asked me to accompany him, so, as the last night's catch was to be prepared, Anthony agreed to prepare the specimens, leaving

We departed about 9 a.m. with a boy and pack burro from the camp to carry our stuff.

The fog had lifted early this morning and as a result the bare rocks of the mountain were radiant with heat, which as the day came on proved very uncomfortable and nearly got the best of me.

The condition of the island was appalling for the only bit of green vegetation found on the 5 mile walk was growing on the sheer walls of the cliffs out of reach of the hungry goats. In fact on the most dry barren desert, more vegetation is to be found. About half way up the island, I saw an adult ♂ Sparrow Hawk flying about too far off for a shot however.

Arriving at the water hole the same barren condition prevailed and the trails of thousands of goats led out in all directions.

Linnets and Rock Wrens were abundant here and in an hour's time I had about 45 specimens, mostly of which were Linnets. While the principal attraction for them here was water it was quite evident that feed also was available for dozens of wren and linnets were seen perched on the reeking skeletons of dead goats, which were scattered all about, picking merrily with much gusto.

Mr. Gallegos and the sailor who drove the pack burro up the mountain for us, went on up about a half mile further to the highest point on the island while I stayed at the spring to pack up the specimens.

A few of the cypress were visible there from the spring and they wanted to collect some branches for specimens.

I picked up several adult male linnets as they came to water and after getting them all packed I too struck out for the top of the island.

I reached it just as the other two were leaving and hastened to make a few photographs of the place. This cypress forest must have been a beautiful spot before the days of the goats but now it is threatened with extermination for the voracious beasts even gnaw the bark from the tree trunks in times of drought and not a seed has had the chance to sprout for nearly 40 years.

In some places the upper branches of the trees interlocked making a complete cover tho the lower ones were eaten off or dead, killed by the goats who had made runways thru the forest like a Microtus does thru the grass.

It was getting dark so I hastened off without having a minute to search thru the cypress growth for birds.

A short distance from the spring we noticed goats straying towards us and when we were at a good vantage point there seemed to be hundreds of them, all headed towards the water. This proved only the vanguard, however, for as the long shadows of the higher hills lengthened out, goats appeared everywhere as if by mystic hand. No wonder the island looked such a picture of disolation !

we arrived at shore in the dim dusk and by good fortune the cameras were taken off dry tho I was drenched, helping the sailors take the skiff thru the breakers. Surf landing is a dangerous pastime in the daylight - but in the dark and with a rising tide it is done with the risk of a life.

Anthony burned the lantern until about 9 p.m. with poor results. A few Petrels were flying about very high, but one was taken and that by a sailor on the after deck.

July 15th 1923

The day was put in skinning birds. I divided them up keeping about 20 for myself.

During the day the pair of Red-tailed Hawks were seen circling about the cliffs above and the single ♂ Sparrow Hawk flew past near the shore.

We burned the lantern again this evening but the results were disappointing for only a single Keaching Petrel was taken tho several were seen flying high and another Black-vented Shearwater flew past.

July 16th 1923

The rumble of the engines commenced about 6:30 this morning and within a few minutes the anchor was raised and we set sail for the Elephant beach where two specimens were to be collected. This, with a complete count of the herd, was the object of the expedition, and while I looked forward eagerly to the experience it rather galled me to think of all the very hard work on my part overseeing and doing the most complicated parts of the preparation.

The day was gloriously clear and promised to give me a view of the island's crest without the always incessant fog which seemed always present on the north head.

Shortly after leaving the anchorage I began seeing goats amidst the crags and sheer walls of the sea cliffs. Really, I cannot comprehend how the beasts can climb into such places and had I not seen with my own eyes, I would

As we rounded the northwestern point of the island we ran into a strong gale and the boat pitched violently. To my delight, for I simply revel in a pitching boat at sea. In the roughest water Anthony hooked a Yellowtail but lost it as he pulled the fish from the water.

The fog was high this morning defusing the light but giving a view of the pines on the north head where they struggled for existence against the goats and the elements with all odds against them.

Beautiful they were with their wind-swept branches stretching to the eastward and I do hope that opportunity is available so I can get amongst them with my camera.

Sheer cliffs descendet from their very roots down a thousand feet or more to the blue water of the sea. Words fail me in trying to express the grandeur of the scene, tho with the next glance the evidence of the terrible scrouge placed upon the island a century ago, presents itself for goats were there on the face of the precipitous crags and yet I marveled at their ability to be there. How surefooted must these creatures be, driven by hunger to such dangers.

Small palms and large oaks were next to be seen tho growing on the slopes of the island and not presenting such grandeur as the pines and not half so picturesque.

I am told that there are no young trees growing thru these forests for the goats get either the seeds or young sprouts as fast as they appear and in the course of time as the trees reach the end of their life the forests will disappear leaving but the nude stumps to tell the tale.

After a two hour cruise we dropped anchor almost a half mile off shore at the elephant seal beach. There they were - dozens of the huge beasts laying in the sun above the highest reach of the waves, and we were all anxious to get ashore to have a close view.

The surf was running rather high and but three were allowed in the skiff at one time so only Gallegas, Gordilla and Anthony went as they wished to make a count of the animals before they were disturbed. After landing the boat was sent back for me and two members of the crew who were to help in the coming operations.

A safe landing was made and by good fortune I kept the camera dry tho I was wet to the waist by a huge breaker that rolled over the boat when it hit the rocky beach.

I immediately began photographing the herd and after the men had finished their count, Anthony shot a huge bull

seal and work for the day commenced.

In the count Gordillo counted 324 and Anthony 325. After the count was made a large bull was selected from the herd and shot. Three bullets from a 7 m.m. Mauser were fired before the animal was finally dispatched.

The skinning of one of these huge beasts is a tremendous task and after the proper incisions were made six keen butcher knives plied all the rest of the day on a single animal.

About noon when I had better light I stopped work and put in an hour getting photos. While waiting for positions I too counted the animals and made a total of 366.

I was very much interested in the beach habits of this large seal and many peculiar habits were noted. The entire herd of 366 was composed of bulls, with the exception of five half grown animals ranging from nearly mature to very old fellows. Most of them laying as close together as possible, above the reach of the waves on the sandy beach. In this crowded position, when one animal wished to move or roll over, he would disturb his neighbor and as a rule this would cause a fight and the two or three combatants would open their great cavernous mouths and snap viciously at each other rearing into the air 6 to 7 feet. These battles did not last long on shore but I saw two old bulls in the surf fighting nearly half an hour, each working for a favorable position with main strength against his opponent and the waves. The most desirable place seemed to be lengthwise along the waves for the outgoing water would carry the beast from his opponent and the intruding wave would force him violently against the opponent, giving him a good chance to sink his teeth into the neck or nose of the other. The use of the flippers and tail while the animals lay basking in the warm sun seemed unusual, for they were as agile as the fingers of man.

A sleeping seal, without opening his eyes, would roll himself over, lift his head within reach of his flipper and scratch his face and nose as carefully as could be, or scratch his side or stomach, in fact any part of him that was within reach. I almost burst out laughing the first time I observed this habit as it seemed really comical.

Kelp and flies were abundant crawling all over the beasts, irritating them as they lay dozing.

I also noticed that when an animal wished to get up on the beach he came in on a wave as far as it would carry him, and then after heading in the direction in which he wished to go would spread the two flippers of his tail to

the widest extent getting as much help as he could from the waves as long as he was within the wash of the beach. After which he would amble up the beach on his tail and flippers until well out on the dry sand, where he would stretch out full length in the warm sunshine and throw sand on himself with his front flippers. This measure seemed two-fold, one to protect his shedding body from the hot sun and the other to keep the flies off. However, they seemed also to use sand for defense shooting it backward with great velocity. This would seem feasible too as they became much provoked when a handful of sand was tossed into their faces for they would close their large eyes, blow and rear up, opening their huge mouths & retreat backward towards the water.

The most interesting part of the animal was his nose and I was careful in skinning it to note as near as possible any uses or extraordinary construction of the organs.

I found that instead of the nasal bones extending to the front of the skull as in all other animals it was replaced with a cartilageous flap which worked freely with the inhalation and releasing of the breath - this then was the organ that caused the loud snore-like noise so characteristic of these strange animals - and further observation revealed the fact that the noise was made as the beast inhaled, for exhaling the soft part of the nose was largely inflated. The animals did not seem exceptionally agile in the water as do the harbor seals but gave the appearance of wallowing and when submerging, would sink body first most of the time.

When rising to the surface and exhaling the breath they would sometimes make a very loud noise like something struggling for breath. This was sometimes heard amongst the beasts on shore tho on many occasions when the nostrils were inflated there was no audible sound made when the air was exhaled.

When swimming only the head was kept above the surface and a very odd appearance it had for the beast was no beauty.

The skinning of the first animal lasted until nearly sundown when I transported it with the skull to the "Tecate".

I returned to the beach to get my camera and take Anthony my trap sack for he had planned to set a line amongst the rocks on the beach so he would not have to help me with my Elephant Seal tomorrow. Pretty wise - but I didn't care.

The lantern was hung in the rigging as usual this evening despite my fatigue from the day's arduous labor and a great many Petrels were attracted by its rays.

The ocean was rather rough with a very stiff breeze blowing in from the westward and they did not come close enough for a sweep of the butterfly net. However, five were

During the evening at last two pairs of Murrelets were observed flying past, going at an upward angle toward shore. This would indicate that the birds were still nesting or interested on shore at least. Several call notes were heard that I believe to have come from this species tho I could not say with certainty.

A single Shearwater flashed past within the rays of the lamp but I was not able to identify it.

July 17th 1923

We went ashore early this morning and while Anthony picked up the mouse traps which contained eleven Mus m. musulas I selected what I believed to be the best of the large seals for a specimen.

The beast was laying near a large rock and taking the 7 m.m. Mauser I climbed to the top of it for a good vantage point from which to shoot.

It took two shots from the rifle to dispatch the beast and then the work began.

Several large seals lay very near to the dead animal and we had to frighten them away before starting operations. One huge fellow, however, was determined to spend his time in that place and while he was driven out to sea with the rest he returned in half an hour and spent the rest of the day within 30 feet of where we were working.

Occasionally he would let out a loud snort when some of us ventured too near but gave no trouble otherwise.

The skinning proved to be a laborious task and not until three-thirty in the afternoon did we cut the skin loose at the nose.

It was then rolled up - hairside in, and with a rope tied tightly around it we tried to drag it to the skiff a few hundred yards up the beach but six strong men were unable to either carry or drag it so we carried the skiff to the skin and launched it thru the breakers around the seals.

I picked up a lot of the shed skin from the beach and sacked up two bags of sand for the taxidermist.

I had planned to take the skeleton of my seal but the day was so far gone that I did not have time to flush it out, so had to leave it much to my sorrow.

Several Western Gulls has assembled on the beach and were pecking into the carcass of the animal skinned yesterday.

We had planned to go back to the barracks this afternoon but the anchor chain had fouled on a rock and Capt. Angulo said that it would take two or three hours to get it loose, so it was decided to spend another night at this dangerous anchorage.

As usual we hung up lanterns in the rigging after dinner. A new moon three days old was shining clearly in the western sky, giving a nice distinct light. This tended to make the Petrels wary of our light or to give them enough light so they were not entirely blinded by the lantern and as a result we secured no specimens. Again the two pairs of Murrelets were active about the island.

July 18th 1923

We did not arise as early this morning and when every one was finally astir about 7 o'clock the captain and crew started to raise the anchor.

The feat was accomplished in a couple of hours after a great deal of hard work and when the boat was under way we had our breakfast.

Arriving at the northeast anchorage the skins were sent ashore for flushing.

A large tent was erected to give shade for the workers and while one fellow sharpened knives a dozen others were busy all around the hides paring them down.

July 19th 1923

The rattle of the anchor chains and the rumble of the capstan were heard at a short time after dawn this morning and in a short time we were cruising slowly to the southward down the east side of the island searching with field glasses every nook and cranny in hopes of finding a last fur seal.

A couple of sea lions were observed, one on the rocks and the other swimming nearby as we cruised at half speed thru the placid blue water in the lee of the island.

We kept as near the shore as it was deemed safe and hundreds of goats were seen near the water's edge where they had come to nibble on the kelp exposed by the low tide,

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and to quench their thirst with briny water. It seems that they, thru many generations have by adaptation, acquired a real taste for salt water and thrive on it!

As we neared the southern end of the island breakfast was served and tho the meal was most welcome it now being nearly 9 a.m. it was broken up several times when different views were seen as the vessel rounded jutting promontories for the island seemed to drop to the very depths of the sea with one precipitous cliff.

I was much impressed by the lower altitude of the island crest at this rose thru extreme, and by the huge outcropping of black lava poured forth by various volcanos in time gone by.

One cone in particular still, despite the eons of time passed since its activity, retained its round shape with crater top and was surrounded by the dark red heat-scorched rock that marked the ultra scorching it had received when the last efforts of the heated tide beneath failed to thrust it farther than the edge of the fiery base.

Vegetation there was none nor did the region show much evidence of there ever having been any for the farther south we went the scarcer became the goats and the fewer the trails thru the barren fields of brown or black lava. Talus could be easily followed by the eye from our vantage point on board ship.

An occasional wandering Tattler, Western Gull and Farallon cormorant was seen as we proceeded down the island's coast but birds were rare at any point in this desolate land!

Rounding the extreme southern end two small precipitous island were seen and to our complete astonishment a United States Eagle boat lay at anchor in the quiet waters near shore.

What a thrill it gave me to see the Star and Stripes floating from the staff in such an unexpected place! and as we passed each national emblem was dipped in respect to the other.

Passing the Eagle boat we proceeded a mile or so to the westward and dropped anchor in a sheltered nook where the dashing surf to the west was plainly visible as it roared over the out laying reef which proved so interesting to me afterwards.

The skiff was pulled alongside and we all with cameras guns etc. were taken ashore for it was our plan to spend the rest of the day getting the last chance of collecting and seeing the sights.

As we neared the landing we found two U.S. sailors with a long boat from the Eagle boat 12 that we had recently passed and they informed us that a party including the captain were on shore after goats for their larder.

They had seen us come up and soon the whole assembly were down chatting with us.

Soon Anthony began negotiations with them regarding the capture of an elephant seal and the whole party excepting Gorello and myself went back to the ship. We decided that there was something to be seen and our presence or absence would not interfere or improve the situation so off we went taking only my camera for collecting was now out of the question.

In a large amphitheater where the storms had piled the round rocks up high forming a very steep rocky beach we found an old wrecked dory and near the banks and above the highest wash of the stormy tides were found the remains of the rock houses used by the Russian sealers over a century ago - for we were now walking over one of the old seal rookeries of Guadalupe and a place with a history of devastation that is depressing to even think of, for the outlying reefs over which the wild waves were clashing, gleamed with a polish placed there by countless generations of fur seals that today are listed as extinct, due to the wanton destructions of man. Words were useless as I gazed about and a depressed feeling seized me as I realized that the estimation of men well versed in the population of Alaskan seal rookeries placed the onetime population of this place at over 40,000 animals. Surely an example for constructive laws governing conservation!

We wandered on up to the more level ground above, a sort of small mesas that had been cleared of their rocks and here were found thousands of small pegs sticking upright in the ground. These were the killing and skinning grounds! The odor of seal oil was still in the air and again the depressed feeling came over me for in the passing of over a hundred years naught remained of a valuable species of animal but these tiny pegs that marked the outline of a skin and had resisted the elements almost unscathed.

We stood a moment as tho entering a sacred place and then after taking a photo and pulling up a few of the closer pegs retreated as tho the very seal ghosts might rise and pursue.

A small brilliantly yellow flowered shrub clothed the landscape giving a touch of color to this dreary place and also proclaimed that the ravages of the goats did not extend in this direction in great enough numbers to exterminate this lovely plant tho I have not the slightest doubt

that if goats could talk and the good words were broadcasted there would have been a stampede to this part of the island!

Suddenly remembering that possibly a change of plans had been made Gordilla and I hastened to the landing where we found the skiff and a sailor from the Tecate waiting for us. He informed us that we were going up to the elephant beach and that the boys from the Eagle Boat were going to help us catch a couple of young seals and take them to San Diego for us. This proved the case, for orders were given to "heave in the anchor" as soon as we were on board, and soon we were gliding out of the smooth sea and from the shelter of the island, into a bounding roaring sea with each wave whipped into a frothing breaker by a stiff west wind. How the boat pitched and rolled to my extreme delight for I simply revel in a pitching craft tossed by a restless sea!

It was nearly four hours before we finally anchored off the elephant beach and the only birds observed along the route were four pair of Xantos Murrelets, a couple of Black-vented Shearwaters and a lone Western Gull that rose over the ship searching for a possible bit of food.

The Eagle boat anchored a few hundred yards to the seaward of our craft and in a short time they put off in their long boat with about 20 young jackies all eager for adventure.

Anthony and I with our sailor immediately set out for the shore in our skiff and after successfully landing sent the skiff back for the cage that had been carried for the capture of a young seal.

Needless to say the Navy boys had the time of their lives running thru the seal herd and scaring most of them into the surf.

Meanwhile our cage arrived and we found it too small so we abandoned it there & then. By this time a small seal had been selected and the boys had a large cargo net stretched over him. Whether it was by strategy or good luck that he was lashed and bound by large ropes to a broken oar without mishap seemed unexplainable for none of the boys were careful & neither were they bitten tho they ventured far too close many times.

I was busy all during the period of catching the seal with my camera & made a number of pictures.

This morning while negotiations were being made it was understood that two animals were to be taken but after the one was captured they decided not to try for another and as the boat had again blown the 4 Blasts on the whistle, which meant "come aboard" the one seal was placed in the longboat & taken to the Eagle boat.

We sent the commanding officer to the ship in our skiff accompanied by Mr. Gallegos.

The sailor soon was on the beach for us and as we boarded our craft three whistles sounded from the Eagle boat which Captain Arguello answered and the boats put out to sea, one back to San Diego and the other to the mooring near the garrison.

When we arrived with just enough good light left from one very eventful day to make a safe mooring for the night.

July 20th 1923

We went ashore this morning to inspect the work that was to have been done on the seal skins and to my sad disappointment I found that my skin had hardly been touched. However, we bundled them up and after getting them to the ship, where several hundred pounds of salt was scattered over them to preserve them on their homeward journey.

A stiff west wind had set in but despite the apparent rough sea we set sail at 12 noon and about 3 p.m. the heavy swells and rising mists enveloped Guadalupe Island.

The sea continued rough all thru the night with breakers bursting continually over the bow which resulted in a wash clear to the afterdeck.

One especially hard roller tipped Mr. Pellecios out of bed to our amusement tho he took it as a good joke himself.

July 21st 1923

Dawn broke with a leaden sky enshrouded in heavy fog all about the horizon shutting out any chance of viewing the distant mainland. However, birds were about today and many Petrels and Shearwaters were observed. About 10 pm.. a lone Black-footed Albatross was sighted following the ship. The bird stayed about for almost an hour and then, as if suddenly realizing that no food would be forthcoming, took off in a otherly direction and was seen no more.

About 1 p.m. the 185 knot mark had been reached and with the fog enveloped horizon, no landmarks were visible and the captain began to be a bit worried regarding his position. So a watch was placed at the logline and all of us kept a vigilant watch in the direction land should appear when suddenly to our pleasure a jutting promontory was seen over the starboard bow and we found that we were about six

miles south of Punta Banda so the course was changed.

We arrived at Ensenada about 4 p.m. and after a hearty meal on shore turned in.

About 10 p.m. the anchor was raised and we set sail for San Diego.

July 22nd 1923

Morning broke over an oily sea with the ship making good headway and San Diego in sight, when after passing quarantine we docked at the Municipal pier to undergo Customs inspection about 9 a.m.

Such was the ending of another very satisfying expedition due to the courtesy of the Mexicans.

1923

Bard - Imperial County

October 26th through November 19th

and

December 10 through December 22nd

pages 68 - 85.

The cotton Rat traps held a single specimen and while quietly peering amongst the tules I saw two small rails feeding near the waters edge. Awaiting my opportunity I collected them both with one shot and upon returning them found one to be a Carolina and the other a Virginia.

After breakfast I went on a short hunt and found Nevada Savannah Sparrows abundant for the first time and on my return collected the first robin of the season.

About a dozen tree Swallows were seen circling over the fields but none were recovered.

In the afternoon I shot a Western House Wren from the date trees in the yard and about 2:30 drove into Yuma. Near the Indian school which is situated on the site of the of old Ft. Yuma I saw about a dozen Ground Doves feeding in a weed patch but had no gun so could not shoot them.

October 27th 1923

I was behind in my skinning so did not go hunting this morning tho a few birds were picked up near camp.

The quail trap held four more quail this morning.

Mrs. Canfield went hunting & brought in three fine specimens - a Saguaro Screech Owl, a Sharpshinned Hawk and a Crissal Tharsher.

The cotton rat traps held one specimen but the skull was crushed & it was not saved.

october 28th 1923

As we were eating breakfast two Green-backed Goldfinches were seen flying past.

On inspecting the cotton rat traps this morning I found another ruined specimen. A brisk wind was blowing and birds were scarce tho I managed to pick up enough to keep me busy all day. A flicker, a Gila Woodpecker, a Verdin and a Roadrunner were shot in the yard near the house.

Towards evening I set a line of mouse traps on the north side of the canal. Much varmint sign was in evidence and several fine places to trap were found.

October 29th

My traps held four *Peromyscus e. merriams*, five *Dipodomys m. sinualus*, 2 *Perognathus formosus* and one *Perognathus perulatus*.

The cotton rat traps held 2 specimens one of which was ruined. While looking at the traps three Florida Gallinulas were seen in the pond and Mrs. C. & I succeeded in getting one apiece. During the day several birds were picked up about the place including two Verdins from the date tree.

About sundown I went with Edward to the pond to reset the cotton rat traps and upon peering thru the tules a single duck was seen on the water & Ed with a single shot 22 killed it the first shot. The bird proved to be an adult ♀ Red head.

As I was picking up the traps a single Texan Night Hawk flew past and when returning to the house I shot a Nuttall Poorwill on the road.

October 30 1923

The cotton rat traps were empty this morning so after breakfast Edward and I went hunting out west of camp. We found Western Mourning doves abundant and Woodpeckers were numerous thru the trees, the resident ones being numerous. I was fortunate in getting my first shot at a Crissal Thrasher. In the afternoon we went down to Bard to set our beaver traps. Many new slides were found but sunset came before the traps could be set.

Several Farallon Cormorants were seen and a lone Anthony Green Heron was flushed from his perch near the edge of the pond and near Bard about a dozen Juncos were seen and one collected.

A Ferruginous Roughleg Hawk was seen perched on a cottonwood tree near a large alfalfa field and Ed tried to get it with his 22 but could not get in range.

About dusk while enjoying a most gorgeous sunset a Skaup duck flew past & was shot.

A neighbor (Mr. Dow) gave Mrs. C. a fine Barn Owl that he had captured in a trap on top of a pole near his house.

Oct. 31st 1923

I had many of my specimens left unprepared from yesterday's hunt so the morning was spent working and no collecting was done.

The cotton rat traps held 2 specimens.

After a late lunch Ed and I went to the beaver pond and set four traps. While setting them four Egrets were seen flying past, two were American and two were Snowy.

Nov. 1st 1923

The overcast sky of the past few days resulted in rain



and at dawn this morning everything was drenched. So I was unable to visit the beaver traps until mid-afternoon. To my delight a fine large ♂ beaver was drowned in one of my sets and I felt amply paid for the plow thru the mud with the machine and the wetting I got breaking thru the dense thickets of arrow weed and scrub willow.

I worked until about 10 p.m. skinning the specimen.

Nov. 2 1923

I was terribly distressed this morning to find that Ed's thieving dog had jumped about five feet up into the tree and pulled down my beaver skin and chewed thru the animal's feet.

I went down to the traps but found them undisturbed. Several Meadow Pipits were seen near the pond this morning and I tried to aux one but accidentally pulled the wrong trigger, discharging a 12 gauge load which blew the bird to bits.

After lunch Mrs. C. and I went hunting west of camp. Most of our efforts were spent in the bushy areas near the cotton fields and a fair bunch of birds obtained.

Many Tree Swallows were seen coursing over the fields and Vermilion Flycatchers seemed abundant.

Nov. 3 1923

The beaver traps were untouched this morning, so aftr a hasty glance over the lake for ducks we returned to camp.

A lone Barn Swallow was observed near Bard and English Sparrows were abundant.

I stopped ina good-seized Cottonwood grove and collected two Red-naped Sapsuckers. Many birds were observed this morning such as Kinglets, Audubon Warblers and Western Gnatcatchers and their abundance was probably due to the recent storm which was general over the whole country.

A single Ash-throated Flycatcher was seen and was the first this winter.

Shortly after our return to camp Edward and I set out for the large pond north of Potholes where we arrived after an hour's walk.

A large mixed flock of ducks flushed as we broke thru the brush that fringed the edge of the pond and I saw Mallards & Green-winged Teal well represented in the flock. Many American Egrets and Pallid Great Blue Herons were seen and Black-crowned Night Herons were abundant flushing with

hoarse croaks from their day roosts amidst the dense tule patches.

Coots were numerous and near the north end of the pond I saw several Pied-billed Grebes swimming in the shallows.

Vermilion Flycatchers were everywhere tho they are very shy and kept out of harms way by choosing vantage points well out in the lake from which to make their catches.

Birds were not abundant tho I managed to pick up about 6 to 8 good specimens. As I was quietly stalking thru the woods a Western Horned Owl flushed from his day roost but I was unable to get a shot at it for it darted in and out between the trees and soon was lost to view.

As we were returning I saw three Harris Hawks perched on the top of a dead tree. I had a long shot at one but did not drop him.

Nov. 4th 1923

My beaver traps held the front foot of a beaver and indeed I was much depressed at not retrieving the specimen.

I had a bunch of birds left from yesterday so hurried home to finish them up.

The cotton rat traps held three specimens, 1 of which was ruined by the trap.

In the late afternoon Ed and I went over on the north side of the canal and set four steel traps for large varmints.

On the way home a Burrowing Owl flushed from the road where it had been blinded by the auto lights. These birds are rather numerous thru the cultivated area and several have been seen lately.

Nov. 5th 1923

I took my camera to the beaver pond this morning and after inspecting the traps which were found to be empty, I made pictures of the beaver houses and slides.

I found many places that indicated a large beaver colony had inhabited the place at one time but an old hunter who frequents the pond in search of ducks informed me that last year some trappers had caught nearly all of them.

The present inhabitants of the colony were subsisting

on willow and tules. The smaller willows being used and were taken to the water in lengths of about  $2\frac{1}{2}$  to 3 ft when the bark was gnawed off.

The shores of the pond were strewn everywhere with barked wood and I noticed several pieces where a bit of bark had been left had sprouted and formed a fair sized bush.

Pieces of flat leafed tule scattered about the water's edge attracted my attention and upon scrutinizing the tules that were growing near the water I found where the animals had made copious harvests of this vegetable.

They seemed to choose the small slender succulent willows for food which they secured by making trails into the thickets and shagging them into the pond after trimming.

A violent wind was blowing so we hastened to camp, where, after an early lunch, Ed and I set out to explore the country north of Potholes in hopes of finding some good beaver trapping.

On our way up we saw about 40 Baldpate *ducks* alight in a backwater pond adjoining the main canal near Potholes and slipping to a point above the pond I killed one as they flushed. Near the Dam a single adult Calif. Gull flew close overhead. Two small ponds were explored above Potholes and a pair of Green-winged Teal were seen and one of them collected. Great Blue Herons were numerous and about a dozen were seen along the run. And as we were walking along the honking of Canada Geese was heard and getting the direction of the sound 7 were counted winging their way upstream.

A belted Kingfisher flew past and as he spied us changed his course amid a series of extended rattling notes.

Several Killdeer and a lone Spotted Sandpiper were seen as we plodded along over the sticky mud left by the recent high waters. We passed extensive thickets of young willow and arrow weeds, some of which were less than a year old.

The growth along this river is extremely interesting for every year during high water the river changes course washing out in one place and building up in another. As a result the growth along the water course is like steps in some places, with a year of growth difference in age.

The places we were now reaching for was where the river ran close to tree growth that was four or more years of age. This condition was found about four miles above Potholes and sure enough beaver sign was there tho not abundant. In a half mile stretch where trees of from 2 to five inches in diameter were growing right up to the river's edge, a number of fresh cut trees were found and about a half dozen slides were found.

The conditions here were much different from the pond near Bard where my traps were set for the animals seemed to use the slides but a few times and then move on to another place. In no place did we find trees cut more than forty feet from the river and in every case Cottonwoods were cut, tho they seemed to like a species of arrow weed very well. The parts of the tree stripped for food was barked on shore and many places were found where at last a dozen short pieces of Cotton wood or arrow weed lay barkless on the bank.

In one place where the river had formed a sand bar about fifty feet from the bank causing a shallow strip of quiet water the beavers had chugged several large tops of cotton wood trees into the water.

At one point where a few trees growing close to the water had fallen into the stream but were being held securely to the bank by their roots, a beaver had attempted to build a house and a great pile of cut sticks with fresh green leaves still on them had been placed there and was well plastered with mud by these industrious animals.

This was the only attempt at house building I saw and I doubted very much the securing of the structure, for a slight change of the current would cut away the bank in short order or a sudden rise of the water would make the house uninhabitable. No wonder these animals are nomadic, for at least twice a year they have to find new living quarters and some years more often.

During the latter part of Sept. of this year heavy rains occurred on the headwaters of the river causing an unusual flood. This drove the beavers from their low water houses and caused them to make four houses this year, enough I should think to discourage the most persistent home seeker!

Nov. 6th 1923

The beaver traps were untouched this morning so I went hunting near camp. A strong wind was blowing so birds were not numerous and in two hours only six specimens were secured.

About 3 p.m. Mrs. C. and I went out hunting and for the first time found Phainopeplas numerous. A single pair was seen some time ago in the mesquites east of camp but today we saw a good number and five were secured.

A single Mockingbird was taken by Mrs. C. and is the only noted to date tho I had found them common in the winter of 1916.

Nov. 7th 1923

AS I was driving out of camp this morning I saw a very large flock of Blackbirds perched on top of a dead tree near the road. Just before firing I saw what I believe to be a few Cowbirds and fortunately a ♀ of the species fell with 9 ♂ Redwings when I shot.

The beaver traps were empty tho an animal had been up one of the slides and dislodged a trap in ascending with a load of willow branches. I had a lot of yesterday's birds left over so did not go hunting.

Nov. 8th 1923

A large darkbodied hawk was perched in a dead tree nearby & Edward went after it with his rifle. Upon close approach it was seen to be a Red-tail and was not killed. Nearby, however, a peculiar woodpecker was discovered and after following it for some distance succeeded in killing it and it proved to be an immature Lewis Woodpecker.

Near Bard when looking at my beaver traps I collected a Prairie Falcon. The bird was perched in a leafless cottonwood tree preening its feathers.

I picked up my beaver traps this morning as I have the promise of a young fellow near Bard to guide me to a large colony that inhabits a pond few miles down the river where I shall try & reset the traps again. I picked up a few birds near camp and later Mrs. C. & I drove over on the north side of the canal, where, upon inspecting the steel traps we found a nice adult skunk had been caught. We returned immediately to camp for the strychnine bottle and gave the skunk a dose.

Nov. 9th 1923

I left camp before daylight this morning and picked up my friend at his home near Bard.

We crossed the main river levee well down in the Indian reservation and after a three mile ride thru the willows and cottonwoods that were growing densely in the river bottom, left the car and proceeded on foot.

The whole aspect of the place we were now in had been changed since early summer by fire and the fellow did not know the exact direction of the beaver pond so we wandered thru dense arrow weed thickets for over three hours without results. Several small ponds were found and in one a Kingfisher was seen perched on a stick over the water, but not a sign of beaver so we returned to the Ford and made another start. This time we were more successful and

after a half hour's walk came to the place, but alas the fire had razed the once luxuriant forest and as a result the beavers had left.

However there was a very little fresh cut willows in the north pond that indicated a sole survivor of what must have been a very large colony.

The place was ideal for these animals and I found evidence of four large houses. One had been demolished by the conflagration and I had a good view of the interior of the bank part of the dwelling. They had excavated a cave about 2 feet into the bank and then had an air vent to the surface above. Apparently this cave had been filled with wood or small sticks for there was a great quantity of ashes in it.

The interior was somewhat caved so I was unable to determine whether a large open place had been excavated or not, from the downward pitch of the entrance I judged that the opening from this den had been thru the sticky house and out by a submerged passage for on the other houses no exit could be seen above the level of the water tho the vent holes to the bank above were easily found.

Much cut wood was found about the shores of the two lakes and as the water had gone down the beavers had dug a canal fully a hundred yards in length.

I arrived at camp about noon tired and hungry for I had not expected such a tramp and had left without breakfast.

After lunch and a good rest Edward and I went up above Potholes to look over a duck pond.

Careful scrutiny of the shores of this pond revealed the fact that a solitary beaver inhabited its still waters and a search soon resulted in the discovery of a fine beaver house. Close search disclosed a few fresh tracks but I was unable to find fresh cut wood. This beaver house was the best constructed one so far found, tho I believe the occupants did not have an underground den for the bank was not high enough above the water level to warrant it.

The clouds which had been drifting about the horizon for the past few days settled this afternoon and threatened rain at any hour tho it did hold off until the sun had set around a most glorious display of color.

Nov.10th 1923

All thru the night sharp showers had fallen and as a result everything was wet and extremely muddy.

About 9 a.m. I set out on a hunt and cautiously peering thru the tules onto the surface of the pond nearby I spied 16 Baldpate ducks and a single Gallinula swimming about.

Awaiting my chance I shot four of the ducks in two shots as they rose from the water.

I spent the rest of the morning hunting thru the fields and mesquite but saw nothing new or unusual in the way of new arrivals of the various birds.

In the late afternoon I drove down to the old beaver pond and set out 2 traps at the foot of the old slides in the hopes of getting another beaver.

Nov 11th 1923

I went hunting this morning thru salt brush near the large canal north of camp and secured a bunch of common things. A sharp watch was kept for new arriving migrants but none were to be seen.

My beaver traps were untouched when I looked at them in the afternoon, nor could I find one indication of new work or when the animals had recently been up the slides.

Nov. 12th 1923

Edward and I went over on the north side of the canal to look at the steel traps which we had set for varmints but found them empty.

The rest of the morning and ell into the afternoon was spent searching along river bank for beaver slides.

Near Potholes five Bufflehead ducks were seen flying over the river and when they alighted at about 250 yards distance Ed shot at them with his 22. One was hit a glancing blow in the head and remained on the water after the others left. A second shot at the wounded duck put it to flight and as the bird swung around in widening circles a hawk rose from the trees and seized it. The seizure was made at such a great distance from me that I was unable to identify the hawk.

Beaver sign was lacking and but an occasional track was found in the mud along the river with no cut trees in the woods.

Bird collecting was not to be had near the river and I shot but 2 or 3 specimens when looking at the traps near Bard late in the afternoon.

Mrs. Canfield shot at an unknown bird perched high up in a dead cottonwood tree and to her surprise found, when picking up the specimen, an adult ♀ Calif. Purple Finch.

Nov. 13th 1923

All three of us made an early start for the beaver pond above Potholes where I had planned to tear up the house to study the construction.

Arriving at the pond I proceeded to set up my camera and photo the nest and as I was peering about the nest I was suddenly startled to hear a large crash and splash from the beaver house. Two lines of rising bubbles indicated that two beavers had emerged from the house rim alternately and each took a different direction. One of them rose to the surface for air when about fifty feet from the house and tho a careful watch was kept over the glassy surface of the small lake and about its shores we saw nothing more of them. This postponed operations as far as tearing up the house was concerned for I resolved to set a couple of traps for them in hopes of collecting a specimen.

We then went up to the duck lake a half mile further to the northward and as I was breaking thru the dense undergrowth saw much of beaver sign. In one place, however, perfectly fresh tracks were seen where a single beaver had ventured well out of the water up an old trail.

Birds were scarce today for a large band of sheep had just been driven over the ground.

Many Wilson Snipe were observed in a nearby dry bay and I shot an Ashthroated Flycatcher from his perch nearby.

Walking carefully thru the woods I saw an adult Harris Hawk flush from an old dead tree and as the bird flew high overhead I fired two shots at it without results.

Mrs. Canfield shot a single Red-naped Sapsucker and a Redshafted Flicker.

Arriving at camp about three p.m. I immediately set out for Bard despite the fact that I was all tired out from the arduous labor and upon my arrival found the beaver traps were empty.

Nov. 14th 1923

Edward collected a ♀ Pintail in the pond this morning & I collected a few common birds near camp. After skinning them I drove down to Bard to look at the beaver traps which were found to be empty as usual.

Later two more steel sets were made for skunks. Mosquitos were terribly bad this evening. Their abundance rivaling that of May when the river is rising and as a result



Poorwills seemed abundant as Mrs. Canfield and I motored back to camp after sunset. Enroute each of us shot a Poorwill and six individuals were seen.

Nov. 15th 1923

I went hunting west of camp this morning and collected a fine lot of birds including a Junco which was a new bird for this region.

In the late afternoon Mrs. C. & I went up to the beaver pond above Potholes & set two traps near the beaver house. The animals were not present so I imagine that they were frightened to other quarters by us the other day.

The evening gave promise of rain as thr sky was heavily overcast with lightning flashing to the eastward.

Only a single Poorwill was seen going home and we did not get a shot at it.

Nov. 16th 1923

I left camp early this morning bound for the beaver pond near Bard where I wished to take up the two traps and make some photos of the beaver slides. However, upon my arrival rain commenced to fall spoiling my chances for pictures. As I was picking up my trap I chanced to see a Fulvous Tree Duck in the middle of the pond and fired a shot at it. Just as the explosion roared over the lake a Duck Hawk flushed from his perch nearby & went hurrying off with his recently acquired quarry. The second shot was fired at it, instead of the duck, causing the hawk to drop its prey, which proved to be a Mud Hen with enough life remaining to scurry into the tules as soon as it hit the water.

Stopping at the store on my way back I chanced to meet a lad who knew of another beaver pond nearby and with his promise to show it to me we again went back to the levee.

This pond was situated about 3/4th of a mile west of the one where I had been trapping and was of the same origin: a bayou left by the river. As we were walking along the shore of this pond I chanced to catch sight of a fleet flying White-winged Doves going over. The bird was too far for a shot but the identity was unmistakable.

Beaver sign was abundant and the shores of this large lake was lined in places with the small bakred willow saplings.

The colony in this pond did not make the runways into the thickets as did the beavers in the other pond, but just came ashore any place and ambled up to the thickets.

The day was stormy with an overcast sky and stiff north-east wind blowing. So after finishing up a few skins left from yesterday I fixed up boxes to pack the accumulated specimens.

About midafternoon I went over to visit the steel traps and found another skunk had been taken. I returned to camp for my poison and about sundown gave him the fatal pill.

Nov. 17th 1923

This was indeed my busy day for I had to get in all the traps, finish the packing and ship the boxes of specimens from Yuma before the Express office closed.

Fortunately I found the skunk was dead so after picking up the half dozen steel traps were set out for the beaver pond above Potholes.

While I was busy with the traps Mrs. Canfield shot a few birds including another Robin.

Arriving at Laguna Dam I was surprised to find the river had risen. This was due to the recent rains which must have been heavy over the watershed of the upper Colorado River. All the open places thru which we used to walk were flooded and it was necessary to find passage thru the woods which was rather difficult.

Arriving at the beaver pond I found the house empty and both traps sprung. The beaver had returned but unfortunately had not got his foot in the traps but had rubbed them with his body causing them to spring.

After getting them out I tried to open up the house but such a maze and tangle of sticks I had never before tried to wrest apart and finally gave it up, content with a small opening thru which I could examine the interior.

A room about six feet in diameter and about 2 feet high was found nestled under the roots of an overtruned tree. On a shelf-like place against the bank was two leaf-filled depressions giving obvious proof that the place must have been occupied by as many beavers, no doubt a pair.

The roof of the structure extended out nearby four feet over the water and at the two entrances where the depth of

was not sufficient the animals had channeled it out making it from 20 to 24 inches deep. This depth ran well under the canopy and afforded the occupants ample space to dive before leaving the shelter of their house, which was exactly the tactics used on my last visit.

No attempt had been made to dig into the bank owing to the fact that it rose scarcely three feet above the level of the pond.

Returning to camp with all haste we finished packing and set out for Yuma to ship the goods. Enroute about a dozen Mt. Bluebirds were seen on a fence near Ross' Corner and three Ground doves were seen in a weed patch near the foot of the hill on which Old Fort Yuma was once situated but now used as an Indian School. Mrs. Canfield had her gun and was successful in getting all of them.

Nov. 18th 1923

The morning was spent packing up the camp equipment and after a frugal lunch we left for San Diego about 2:30 p.m.

Darkness overtook us in the middle of the plank road and after a couple of hours during which the greatest care had to be exercised in keeping the right road we made camp for the night about 10 miles east of Holtville.

After a dinner of boiled eggs, tea and bread I set the rat traps by the light of the gas lantern. Dipodomys deserti holes were numerous and I had little trouble in locating them. I especially cherished these animals to turn over to the taxidermist for a group.

Nov. 19th 1923

The sun rose in gorgeous splendor this morning and I could not help taking pictures of the colored sky.

The rat traps held six Dipodomys deserti and three Dipodomys m. simulans. These smaller animals seem parasitic to the larger ones as they were taken at the entrances of the deserti and on each occasion in the act of entering.

After a leisurely breakfast camp was packed up and the Ford loaded. By this time the light was strong so I shouldered my camera and set out to photograph Dipodomys holes. A number of exposures were made and after carefully gathering up a lot of sticks, dead shrubs etc, which were found near the holes, we set out for home.

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Along the road as we journeyed towards Holtville many Horned Larks were seen and several collected. A fine large Ferruginous Rough-legged Hawk was seen perched on the top of a sandy hummock near the road and I tried to stalk it but the wary bird was not to be approached without the enemy completely hidden and flushed when I was about 100 yards away.

After reaching the outskirts of the farming area the monotonous part of the journey began and the dirt roads which had been made muddy by the recent storms were now dried but exceedingly rough, making it all the more irksome with the slow speed necessary negotiating them.

After having lunch in El Centro an uneventful journey brought us home about sundown.

Dec. 10th 1923

Mrs. Canfield and I left San Diego about noon bound for Bard, Imperial Co., Calif. where I wished to put in another fortnight getting data on the winter birds of the region.

During the two days just past a violent wind storm had been raging and tho it was much quieter today there were windy gusts still lurking about and the weather had turned decidedly cooler.

Near Descanso a lone Merriam Chipmunk crossed the road and a splendid beauty he was in his heavy winter coat. It seemed rather unusual for him to be about on a day like this for the gutters on either side of the road held pools of ice instead of water!

A few miles eastward from Descanso two large flocks of Juncos were seen and another Chipmunk while the leaden sky began to loosen snowflakes from its clouds, and they fell slowly to the ground thru the quiet atmosphere.

Darkness overtook us near Jacumba and also did a bleak cold wind from the desert spring up. Nothing seems to chill the traveler more than one of these cold desert winds and soon our teeth were fairly chattering inspite the fact that the side curtains were up on the Ford. Hard luck set in at the top of Mountain Spring Grade when I heard bump bump bump from a flat rear tire but inspite of the darkness and cold wind I soon had it fixed and was speeding along.

Arriving in El Centro about 7 p.m. I spent an hour vulcanizing the tube which was punctured with a ten penny nail and at 8 p.m. was again rolling eastward.

Just as the Ford rolled up on the pavement east of Holtville a sharp rain commenced to fall and continuing for nearly half an hour but I was rather pleased for only good could now result for the bad dirt roads were all left behind.

Arriving at the western end of the plank road I saw many travelers camped for the night. This had an ominous meaning and I felt certain then and there that the road was blocked by sand. However as there was no sign posted or any sort of obstruction in the roadway I went merrily on and in a short time was plowing thru small drifts of sand that had been blown across the road. Ten miles of the twelve were negotiated without one bit of trouble when suddenly I saw what appeared to be several machines stuck on the road ahead. This proved to be the case but fortunately they were in the sand off the board road and by the aid of the suxstell [?] axle I was able to plow thru many very heavy drifts and left all the stranded machines in the rear. By this time I began to feel quite easy and had mental pictures of soon being in Yuma but the worst was ahead for when I struggled thru an extra large drift my lights displayed a veritable mountain on the road ahead which so dumbfounded me that I forgot myself and let the Ford stuck in a small drift.

The rest of the night was spent there with but one consolation, that I had much company all about. Several sharp showers fell during the night so we tried to keep warm with coats and wraps sitting up in the curtain-draped Ford.

Dec 11th 1923

Dawn found a sad looking sight for fully a dozen machines were stuck nearby, some buried up to the running boards.

Luck was with me for my persistence during the night had put me well in the lead and as there was no passing I was to be the first one pushed out. As soon as it was good and light the respective parties began showing signs of life and soon there was a large assemblage of willing workers and the task began.

Mrs. Canfield ran the Graflex while I helped the gang shove out the cars. Three hours we worked getting the dozen cars over the half mile of bad sand and when it all was

over we were a tired but thankful bunch.

Being in the lead I set pace over the rest of the way and a great cavalcade it made as we strung into Yuma about 12:30, each in search of a restaurant, for not a person in the party had partaken of food since the night before.

We arrived at camp near Bard about 1:30 and were too tired for further operations this day. As I drove up to the house I was surprised to see a Marsh Hawk flush from beneath a nearby fig tree. When the bird raised I saw it was carrying a portion of a bird and upon inspecting the place where it had been perched I was much surprised to find the victim had been a Gila Woodpecker.

Dec. 12th 1923

More rain fell during the night and the whole country site was drenched.

I went out for a short hunt and killed a few birds. I searched about for new arrivals but none were noted. Gambel Sparrows were unusually scarce and only one small flock was encountered.

Several gopher traps were set about the yard and two specimens were secured.

Dec 13th 1923

Dawn broke with a strong northwind blowing which increased in violence making hunting almost impossible.

A passing flock of Blackbirds yielded a couple of specimens and my gopher traps a single gopher.

Dec 14th 1923

Favorable weather again prevailed this morning and I had hardly stepped from the door when a small bunch of Juncos were seen in the nearby cotton. Of five specimens collected all of them were *J. v. thurberi*. Birds were not numerous tho I managed to pick up a fair bunch. I was most impressed by the absence of many that I expected to find. The Gambel Sparrow were entirely missing in spite of their overwhelming abundance of less than a month ago and Sage Thrashers & Desert Wrens were not to be found. During my stay in 1916 I was finding both species occasionally at this season.

Towards evening I set a long line of mouse traps in a desert wash north of the main canal and a half dozen gopher traps about the yard.

Dec 15th 1923

The mouse traps held an abundant catch the most noteworthy of which was a pair of sigmodon. These animals were taken about 100 yards up the wash well into the desert "Quail Brush" association. The nearest point from the traps in which these animals are known to live on when the proper kind of cover could be found was on the south side of a 60 foot canal which was running full of water at the time. Close examination of the specimens in the flesh showed recent particles of mud clinging to their pilage. This feature indicated with certainty that they had both crossed the canal during the night.

On further thought it would not be improbable to say that this phenomenon indicated the breaking up of a larger colony somewhere near where the populations had grown too large and parts of these animals were endeavoring to establish new quarters elsewhere.

In the middle of the afternoon a violent east wind sprung up and I was unable to set my small traps tho I did make two sets for skunks using the accumulated bodies for bait.

Dec 16h 1923

The wind raged all night and this morning the air was still heavy with dust.

I had some specimens left so attended no collecting during the day.

In the evening I set out a line of small traps thru a desert wash.

Dec 17th 1923

My traps held a poor catch which included 1 Perognathus and 5 Dipodomys.

My skunk traps had been robbed of the bait by some small varmint, probably a fox.

Dec 18th 1923

The day was one of rare beauty so I went hunting north of the main canal getting a good basket full of birds. The most noteworthy of which were two Desert Wrens and a Nevada Sage Sparrow. Both of the above species were very late in arriving this year.

As I was returning in midafternoon my attention was drawn to a small moving object near the edge of a recently

cleared field. I stalked it and was much surprised to find an immature Citellus tereticandus running about. I was close enough to use the auxillary to shoot it but the main 12 gauge shell was accidentally discharged and blew the specimen to bits.

The only explanation I could offer regarding the appearance of this animal at this season was: that it must have been warmed up and driven from its burrow by the recent burning in the process of clearing the land nearby.

Dec 19th 1923

My steel traps held an immature female skunk this morning.

I did no hunting today as much of yesterday's take yet remained to be prepared.

Dec 20th 1923

I went hunting this morning collecting a number of specimens. The Gambel Sparrows have as yet not returned. A single Vermivora was taken near the edge of a cotton patch thus indicating this species as a winter resident.

I killed a Horned Owl that had been held captive for the past week. Upon skinning the bird the odor of skunk was very noticeable. The species is known to attack skunks from the experience which Mr. A. B. Howell and I had in Tustin, Arizona, in the year s of 1916 - 17 (see Condor).

Dec 21st 1923

The day was spent packing up and getting material for the taxidermist.

Dec 22nd 1923

I left camp about 10:00 bound for San Diego. A strong north wind was blowing which frustrated my plans of securing a pair of Virdins and a pair of Vermilion flycatchers for the taxidermist.

On reaching the board road over the sand dunes many Horned Larks were seen and I spent about an hour collecting fine specimens.

Stopping again at a point about 10 miles east of Holtville to obtain some material for the Dipodomys group I shot three more Horned Larks.

San Diego was reached about 8:30 in the evening.



April and May 1924

Two trips to the Coronado Island

First part of notebook missing

*See Transcriptions  
in May box*

April 19 1924

- 1 -

....middle of the island to the north end where the locality seemed better suited for there was not so much cactus to injure the wandering young.

The Farallon Cormorants had also moved with them in fact nearly the entire population had changed nesting places, for later I found that even the Brants were occupying the cliffs below.

I could not determine the reason for the move as the pelicans seemed to still remain in their same abundance of about 750 pairs, tho the Farallon Cormorants have been reduced about 75% of the 1916 population. This fact is no doubt due to their being disturbed by pleasure parties who visit the island during April & May, allowing the gulls to destroy their eggs & small young.

It was my estimate that less than 200 pairs of this species are to be found on the island this year.

I had never been amongst the Brants in former years so I could not place an estimate on them but they now <sup>will</sup> well outnumbered the Farallons.

When arriving at camp in the late afternoon I had a pleasant half hour watching Brandts Cormorants diving for nesting material. This species, quite different from the Farallons, use seaweed for their nests & pluck it from the depth of the sea. Taking the air Cormorants fishing <sup>fashion</sup> their load so burdens them that they have to fly downwind until well above the water, then turn back or upwind to get elevation to reach their nests.

After dark I lit the gas lantern & about 7:30 Petrels began coming in. After many swings I finally caught one in the dip net.

(The night being bright with a full moon the gulls & pelicans were active until I fell asleep which was after 10:30 p.m. and in the morning Mr. Hoffman said he had heard them most of the night.

A heard of Zalophus had taken up their quarters in a nearby cove and the night was made hideous with their noise, keeping part of us awake the greater part of the night. A heavy high fog came up very early in the morning which vexed me terribly on account of poor photographic light.

Sunday, April 20 1924

The day dawned with a leaden sky giving promise of poor photographic conditions. In spite of this fact I lugged my heavy camera & set out for the rookeries with the rest.

Hoffman set out towards the north end and after an hour's stay joined me near the saddle. We then commenced a search for auklets & after digging out several burrows in the colony near the summit of the island with no results we went down to some caves on the west slope where I had found them commonly in 1915. Here again we failed, nor could a single auklet track be found on the soft dirt floor of the cave.

It was now nearly noon & as the boat was coming over for Scott, Hoffman too decided to go back as he figured he was thru with the Coronados.

After seeing them depart Gallegos & I rowed around on the west side of the island to inspect the sea lion rookery.

A fair breeze was blowing and the sea was rough, but we managed to get close enough to photograph the herd.

I was much impressed by the way these animals used their flippers when on land, for instead of using the front ones to scratch their faces with, they used the back flippers, bending their head around & the back flippers up. Even the huge bulls 8 or 9 ft in length were seen scratching their faces in that way. I saw a single Black Turnstone in the surf near the seal rookery.

Monday, April 21st 1924

The sun rose gloriously clear this morning and soon after breakfast Jose & I boarded the skiff & set out towards the south end of the island. Not a breath of air stirred the water, making a heavenly day.

Three Black Turnstones and a single Tattler were seen near the south end but were in too dangerous a place to try to picture or collect them.

After making a snap or two of the natural bridge we started back and while sneaking up on a bunch of gulls that were at rest in the water, the ca-ca-ca od a duck hawk caught my ears. Search about with the glasses I saw it soaring about the face of a small cliff and sitting on a ledge sat its mate, also calling. I tried to have Jose land me as it was about the only way in which I could get to the nest but he proved so helpless with the oars, having never used them before, and the surf so dangerous that I gave it up.

Near camp I saw three Parasitic Jaegers and a Pink-footed Shearwater feeding with the gulls in the water. Hoffman should have stayed as these were the very things he sought.

Rowing on up to the north end we made pictures of the Brandt Cormorants in their precipitous rookeries.

Arriving again in camp I started off to the Pelican colony for more pictures.

As I was ascending the steep slope I chanced to see a gull robbing a nest and after chasing it away I set up my camera, strung out the thread and awaited results. It proved a two-hour wait but the gull did return & I made several snaps as it "cleaned up" on the nest.

Meanwhile I had a fine chance to watch the bird life in the surrounding rookeries.

An old pelican nearby attracted most of my attention for her young now well covered with natal down and able to stand up, kept teasing her to feed them. They would run their short beaks between her mandibles making a loud hoarse noise but apparently she was not willing to feed them for she kept pushing them away. Finally, after about twenty minutes of vociferous coaxing she consented and opening her great beak she held her head over towards them and two of the three got their heads down into her throat. Then when all was ready she seemed to give a sort of heaving movement with her body, regurgitating half digested food of which both young procured a large beak full. The other little one then had its turn. About on the last operation a couple of small fish that appeared to be sardines escaped the beak of the youngster and fell to the edge of the nest. Two hungry gulls nearby made a dart for them but the old pelican warded them off and picking them up one at a time she gave them a toss in the air and caught them higher up in her throat & swallowed them again. The action reminded me of a dog gulping down a small sized piece of meat, lifting it from the ground & with a forward thrust of the head catch the meat far back in the throat.

The gulls stayed about much to the distress of the old pelican and whenever they came too close she would take a snap at them with her beak which would close with a vicious clap.

The gulls were abundant and were all about in pairs searching for nest sites. It didn't seem to be so much the question of finding a suitable site, for any little depression makes a gull happy, but that of congenial neighbors for when a pair of gulls came too close to another pair that had already located, trouble was sure to follow and usually ended in a hasty retreat for the newcomers.

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It seemed to be the period of copulation for pairs that had their nest site chosen could be heard everywhere uttering the mating call and many were seen copulating. The act was performed in much different way than any birds I had ever witnessed before for the male would mount the female while she was standing and with his wing extended for balance would utter the mating call while making contact. The performance would last a couple of minutes and sometimes longer. In the evening I caught another petrel with the net and they seemed more abundant than usual.

Tuesday, April 22 1924

The sky was heavily overcast this morning so we were late in getting our breakfast. However, about 10 a.m. the sun began to burn thru & so I lost no time gathering up my cameras and climbing the island side to the rookeries.

I searched about the precipitous cliffs for suitable views of the Brandt Cormorant colonies and after several exposures I climbed on up to the Farallon Cormorants & Pelicans where I focused on a nest of the former that contained eggs in hopes the gulls would attempt to rob it. Three hours passed without results & I gave it up as the afternoon shadow was creeping over this side of the island and the fog banks were drifting in.

After dinner I set my dozen mouse traps about camp and before bed time each trap held a *Peromyscus m. dubios* (?). They were again reset.

Wednesday, April 23 1924

A threatening sky with a stiff south wind blowing came with the dawn and by six o'clock slight showers were falling. The boat was supposed to call for us today but with the prevailing wester conditions it became more doubtful as the day progressed for as we were at our breakfast rain began falling in earnest driving us to a nearby cave for shelter. The storm continued off and on for nearly 2 hours drenching everything.

Fortunately for me I had a water proof sleeping bag but poor Gallegos was doomed to have a poor night.

About noon the sun came out beautifully and I, having given up the boat, packed my 5x7 plate camera and my Graflex to the rookeries again.

I had great luck with the pelicans feeding their babies and should have some good stuff. Nearby I found a gull's nest with one egg in it. This was the first gull egg of the season. Later Jose found 2 more single eggs on the south end. Later taking only the 5x7 Jose & I went to the south end of the island to look over the colonies & research for auklet burrows. A careful search failed to reveal any of the latter species.

and I feel confident that they are no longer inhabiting this island.

Gulls were seen everywhere and I estimated that 20,000 pairs must be inhabiting north island alone.

A small colony of Pelicans with a few Farallen Cormorants were found on the east side of the island towards the south end. They were very timid and left their nests en masse at our approach. This gave the robber gulls an opportunity and dozens of nests were robbed before our very own eyes.

This apparently will soon lead to the extermination of the Farallon Cormorants for there seemed to be less than 200 pairs now present in the rookeries while the Pelicans seem to be holding their own.

Returning to camp we fixed up a canvas shelter for the sky was again overcast & looked like rain. I captured two more Black Petrels with the net this evening after a two hour try.

Thursday, April 24th

The boat came in early this morning & we lost no time in embarking.

Leaving north island we circled about the end of south island to sweep its slopes with the glasses.

A very large rookerie of sea lions was seen on the west shore and near the south end a fair sized colony of Pelicans was nesting on the protected eastern slope.

Numbers of Brandt Cormorants were seen on the guano covered rocks above the wash of the waves but I was unable to determine whether they were covering nests or not, though a dozen gulls coursing to & fro overhead would indicate the birds to be nesting.

After an uneventful journey we docked about 12:30 at the Municipal pier.

May 25th 1924

In company of Mr. Gallegos & Mr. van Rossen I left the Municipal pier about 10 p.m. (?) on board the Mexican Patrol Boat Tecate bound for a 5 day trip to the Coronado Isls.

Stopping at Roseville we picked up Mr. Sefton's skiff. The tide was at its lowest ebb and we hadn't gone a great distance before striking a mud bar. Here we stayed for about half an hour waiting for the tide to rise.

An uneventful trip brought us to south island, where, after a fine lunch served on board the ship, while the sailors put our stuff on shore, we established camp.

Later we all put out searching for murrelets on the east side of the island.

I found two murrelets incubating while Van found several single eggs and 3 birds with sets. On the trail near camp he picked up the dried headless carcass of a Black-throated Gray Warbler and a Western Flycatcher. These birds had no doubt been killed by duck hawks.

May 26th 1924

We made an early start for Little Middle Island where, as we were about to land a Rhinoceros Auklet was seen swimming near the island. Van shot it and gave it to Jose.

A pair of Black Oystercatchers were seen flying about.

We started operations by going to the large cave on the south end where to our amazement we found the place absolutely stripped of sets. Someone had beat us to it.

Returning to the top we searched carefully for Black Petrels. Two were located in rock crevices, tho only one was obtainable. This bird was having a nice fresh egg.

I found a single unattended murrelet eggs in a crevice near the top of the island while Van located a bird on two pipped eggs under a pile of boulders.

Returning to the Socorro Petrel colony we searched carefully for inhabited burrows but none could be found tho abundant activities of these birds was found in the shape of newly started burrows (?). I found a pair of very anxious San Clemente Song Sparrows inhabiting a patch of bushes on the north side of the island. A half hour watch revealed the nest which contained two newly hatched young.

Every place we searched had been recently explored by

other parties so after an hour or two we tired and started for camp. After lunch Van & I went across the cove to search for murrelets. We spent the entire afternoon climbing about the precipitous slope without finding a single murrelet. The only exiting event of the afternoon was when Van stepped directly over a coiled rattlesnake that was not observed until I called his attention to it a few moments later.

I located an inaccessible Rock Wren's nest.

While ambling around over the rocks I found the remnants of a Western Robin that had been killed by Duck Hawks during the winter.

May 27 1924

An early start was made to Big Middle Island where we arrived in about half an hour.

A Great Blue Heron was seen standing in the kelp near the south island as we were rowing over.

As there was no place to use our mooring anchor one of us had to remain in the skiff, so I was elected.

Van & Jose spent two and a half hours searching thru the rocks and under the bushes without results.

Gull nests were abundant and most of them were heavily incubated. 2 clutches of young were found & taken for skins.

The most unusual thing was the finding of a nest of Calif. Great Blue Herons with 2 new hatched young & one pipped egg. These were taken for specimens and constituted the first breeding record for the Coronados of this species.

A pair of Duck Hawks had been soaring about overhead during our morning stay at the island and as we were rowing towards south island the ♀ was seen to fly directly into a recess in a good sized cliff on south island.

My two and a half hours spent in the bobbing rowboat resulted in a most terrific case of sea sickness, making me useless the rest of the day.

Late in the afternoon I felt a bit better & we all went up on the island to search for murrelets.

None were found tho when passing over a recently burned area Jose found a new quail's nest that had been destroyed by the fire.

Van had three single murrelet eggs that were found Sunday afternoon. We looked them over & found no birds incubating or second eggs yet laid.

~~May 28 1924~~



May 28 1924

We all started to the west side of south island in an attempt to locate the Duck Hawks' nest and collect them if possible.

The met us at the crest of the island and Van took a popat her without results tho some of the shot struck her.

Proceeding down the cactus covered slope very cautiously on account of rattlesnakes, Van soon from a vantage point over the nest cliff shot the male, dropping it into the surf below. This necessitated the return to camp and the embarkation for a long journey in the skiff so he left his gun & the shells with me.

I did not have long to wait before the old ♀ returned and a long chance shot failed to reach her, however she returned and a charge of 5s brought her screaming to the ground at the foot of the cliffs.

While I was peering about over the edge of the cliff marking the location of the fallen bird I saw two young duck hawks perching on the edge of a ledge near the south end of the cliff. Thinking that they were about ready to fly I shot them.

It took me fully an hour and a half to get around to the base of the cliff where the old ♀ had fallen and when trying to cross a fair sized brush patch I bombarded it with large rocks before venturing in. In this case the efforts proved worthwhile for five different rattlesnakes responded and I chose another route.

After picking up my old bird I attempted to get my small duck hawks but found that it was too dangerous to climb, owing to rotten rocks without a short rope, tho it was but 10 feet up or down to the ledge.

On going above & looking down I found that by throwing rocks I was able to knock one of the dead birds off and while doing this, to my surprise, the cackling voices of two more young greeted my ear.

Meanwhile Van Rossem had made it around in the skiff, picked up his bird and was again at the top of the cliff. I called him down and with his help I was able to get to the edge of the nest ledge and secure my other dead young one. The two live ones were wild so it was found necessary to return at some future time with a rope.

When on the edge of the nest ledge I gathered up a few handfulls of feathers to examine for species later. The whole place was one mass of feathers, in fact it appeared as tho a few feather pillows had been torn apart there.

These feathers later proved that such birds as Russet-backed Thrush, Hermit Thrush (subsp?), Western Tanagers, Ash-Throated Flycatchers, Xantus Murrelets, Petrels, Dusky Warblers, Housefinches, Mourning Doves and others that could not be possible identified had fallen prey to these vicious birds. *possibly identified*

At camp we found a movie outfit working. They had a couple of palm trees piled up on the beach but the weather made it. A very strong north wind sprung and the skiff was dragging its anchor so bad that it was necessary to pull it upon the rocks.

This worked fine until about five p.m. the wind & waves having grown worse, I chanced to look up just in time to see the skiff going to sea - and it was not without worry and some help from one other fellow on the island that we again had it safely moored with an additional anchor.

May 29 1924

We all made an early start for the north end of the island, taking with us a length of rope with which to safely descend to the Duck Hawks' nest. One of his singles was found on the first day had a companion egg laid during the night but no bird was present.

After everyone arrived in camp we lost no time packing up our goods and were soon on board the ship bound for home where we arrived about 3 p.m.

*all transcription more additional*

*was seen and Jose shot a Trail Flycatcher.  
(R. transcription)*

*When all were returning to camp, a very strong wind*

*impossible to make up the skiff.*

June 10 - 13 1924 Descanso Bay, Mexico

June 16 - 18 1924 with J.W. and Tom Sefton  
to Grand Canyon

June 26 through July 25th 1924 to Laguna Hansen,  
Baja California

June 10 1924

In the company of Don Jose Gallegos I left San Diego about 3 p.m. bound for the vicinity of Descanso Bay where it had been planned to spend a few days searching for the rare Perognathus pacificus.

We crossed the border without delay or trouble, in fact the Mexican sentries were most courteous when Jose showed them his papers. Our route was over the regular coast road to Ensenada which after clearing the last guard house which is situated about 2 miles east of Tijuana, turned south into a range of low hills that lay in an east to west direction ending precipitously at the seas shore.

Horned larks (actra) were abundant all along the route and where proper conditions prevailed, especially in the canyons thru which we passed, such species as pallid wrebblits. Phainopeplas, Calif. Thrashers & Costa Hummers were seen.

As we passed a small settlement called Rosarito, which consisted of a ranch house and a few scattering sheds situated in a small canyon near the sea, a flock of Brewer Blackbirds were observed feeding in a field of corn. Near by I noted a very fine place to trap but as there was yet an hour of sunshine left we decided to go as far as possible before stopping. This we did and made camp in the dry bed of a large arroyo near the sea on the north side of Descanso Bay. Traps were strung out thru the dense chaparral on the benches above the rocky creek bed.

Many kinds of plant life were found in the creek bed. 2 kinds of sumac, miscal plants (agave), San Juan (wild tobacco), Calif. Holly and several kinds of smaller shrubs and on the hillside were found 3 kinds of cactus, ( cholla, cirius, tunis). Black-eyed Susans, Buckwheta sage etc. I placed the zone as low-upper Sonoran. As we were returning to camp after setting the traps a coyote was heard yelping up the canyon. Near camp several scrubby thickets of willows were growing.

June 11th 1924

The traps held 1 Reithrodontomys m. longicauda, 2 Perognathus f. fallax, 4 Peromyscus e. fraterculus & 9 Peromyscus m. gambeli. Nothing much of interest.

After breakfast Jose & I walked down to the beach and about half a mile north where the shore was bounded by precipitous cliffs.

Bird life was scarce tho we found a Black Phoebe's nest placed about 4 ft above the beach sheltered by a small cove.

A few Western dark mantled gulls were seen along the shore and an occasional pelican & cormorant was seen flying over the waves.

A small dripping spring was found on the lower edge of the cliffs and with a good deal of interest we noted San Juan trees and Bermuda grass growing where the waves would be sure to clash on them during stormy weather. I tasted the water & found it very palatable.

Near a small lagoon of brakish water just back of the san beach Cliff Swallows, Brewer Blackbirds and a pair of killdeer wereseen while flying about were seen buzzards and Western Ravens, not more than one at a time, but undoubtedly individuals of many pairs living in the near vicinity.

A couple of men were found on the beach working with pinch bar and mattock, moving rocks under which they were finding clams. This was the first time I had even seen or knew of clams being under the rocks and I watched them until they had fsair sized bucket filled with keen interest. Returning to camp we went to work on our mammals.

While at work I had an excellent opportunity to observe the birds about camp and saw several Traill's Flycatchers, Cassin's Kingbird, many Costa Hummers. A pair of Calif. Jays & Anthony's Towhees were abundant A pair of pallid Wrentits were feeding grown young in the bushes near camp while from the hillside in several directions the familiar call of Valley quail was heard.

After getting our skins prepared we took our cameras and went again to the beach where several snaps were made of different places. About a dozen Cliff Swallows were seen gathering mud for nests at the edge of the small lagoon, flying up the valley with it. Probably to some cliff along the arroyo. Returning to camp we prepared our supper, packed up and left about five thirty searching for another trapping ground.

Several good places were noticed on the mesa and after about 6 miles of travel we came to oat covered hills that held no prospect for the small animals we sought so we turned around retracing our steps we stopped about 1½ miles east of where we had trapped last night. The ground chosen was a mesa near the sea & of a sandy nature with some small lumps of cholla scattered thru the brush, the greates amjority of which was Buckwheat sage. Careful scrutiny revealed the presence of gopher, Dipodomys and some small tracks I thought to have been made by Perognathus. Many cottontailed rabbits ( S. a. auduboni) were observed as we drove along and a pair of Sparrow Hawks had their four young on the wing. Several pairs of Bells & Western Lark Sparrows were seen as we were setting the traps. The night was spent nearby for we had

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had our supper & needed but to unroll our beds after a suitable spot had been found.

June 12 1924

The traps held 3 *Dipodomys a. agilis*, 1 *Reithrodontomys m. longianda* and 14 *Peromyscus m. gambeli*.

Tracks around several of my traps were very tiny with tiny tail marks and led me to believe that they were made by the *Perognathus* I was trying to catch. Several places were found when setting the traps last night where some diurnal animal had been shelling small seeds near the hole in the bushes so I set six rat traps baited with bread this morning.

Rolling up our beds we packed the Ford and went back to the shade of the small willow trees where we had our breakfast & went to work.

Two new species of birds were noted near camp - 1 ash-throated Flycatcher and a pair of Barn Swallows. The pair of Jays returned and I collected one of them tho the plumage was very badly worn.

About noon when the tide was low I dug a basket of clams.

At trap setting time this evening I discovered another flat tire and an inventory of the repair supplies disclosed the fact that there were none so shouldering the trap sack we set forth to set them and get some patch cement from a Japanese fisherman who was camped nearby. He proved most affable and brought us back in his car, not leaving until the tire was on the rim & pumped up.

We strung out the traps over a cholla covered mesa where a good deal of *Dipodomys* sign was visible.

The rat traps set this morning held an adult Ground Squirrel. Apparently this species was responsible for the seed shells found in the bushes.

A family of Rock Wrens were seen about the cliffs near the Jap's camp & one immature was collected.

June 13 1924

The traps held 1 *Peromyscus e. fruticulus*, 1 immature *Dipodomys* and a *Peromyscus m. gambeli* with not an indication of *Perognathus*. *Dipodomys* sign was everywhere but there is so much ripe grass seed for them to eat that they pay but

little attention to the bait on the traps.

A Cassin Kingbird was seen nearby this morning.

We packed up & left about 8 a.m. bound for San Diego.

Several stops were made enroute to make pictures of the various typical flora and I noticed how the plant life changed as we approached Rosarito. A small pond of brackish water was seen at the mouth of the canyon near the beach line & an American Egret and Calif. Great Blue Heron were seen standing knee deep in the water. Here the agaves & thick limbed chollas gave way to grass-covered plains & when we again drove into the hills Black-eyed Susans, sage & Monkey flowers were the prevailing plants, with flat-leaved cactus instead of the cholla and Spanish bayonet instead of the agave (mescal plant). Here were seen Phainopepla, Calif. Shrikes, Meadow Larks, Burrowing Owls & a single Mocking bird flew over the road as we passed.

We again crossed the international boundary without trouble or delay and while the road was paved the landscape was obstructed by unsightly billboards & cultivated ground. Nowadays a person has to go to Mexico to see the country unscarred by the hand of man!

Eleven forty-five found us again in the city.

June 16th 1924

Left San Diego 9:05 in company of Mr. J.W. Sefton, his son Tommy & his nephew Sefton Wakefield bound for the Grand Canyon.

Day foggy on coast but after crossing coast range cleared. Made Yuma at noon - had lunch and drove on.

Arrived Phoenix at 9 p.m., stopped at Jefferson Hotel.

June 17th 1924

Made .....o'clock start driving north-westward through beautiful farm country crossing the dry Rio ..... and were again in desert country. Creosote & Giant Cactus - looks like good mammal collecting.

Near Wickenburg we picked up a couple of Round-tailed ground squirrels & *Ammospermophilus harrisi*.

Found a fine looking camping place a few miles below Wickenburg. Groves of large cottonwoods bordering a small stream.

After leaving Wickenburg our route led through grant cactus & creosote, rising gradually in elevation towards a higher range of Mts. Road turned northwest and up a beautiful grade into junipers and scrub oak. Here we found a small flat with a large colony of Prairie Dogs. The first I had ever seen. Stopped & shot 7 in about 2 hours.

Next crossed a small valley and rose again into oaks & pines. Beautiful country but being midday saw no birds.

Arriving at Prescott about 1.p.m. & had lunch.

Route now passed thru range of eroded granite boulders, very old geological period - made a few pictures. Road then led out over a great level grassy valley. Prairie dogs were not uncommon but while several were shot none were returned as they drop down thru holes unless stone dead.

After many miles we climbed in elevation into a great belt of cedars and traveled through this association until reaching Williams.

Spent the night at the Harvey House & got well called down for showing up in the dining room sans coats.

Skinned until after midnight getting up the squirrels and Prairie dog.

June 18th

Left Williams about 9 a.m. stopping along the route to hunt. The road held a northerly course through scattered groves of Yellow Pine. Our first stop for collecting was but a few miles north of the town where we shot a few birds and saw a Swainson' Hawk & 3 Horned Owls.



Thursday June 26 1924

With Mrs. Canfield driving my Ford and Mr. Gallegos accompanying me in the Museum Ford we left San Diego at 2 p.m. bound for a six weeks trip to Laguna Hansen in Simon Juarez.

The route was via Tecate where we crossed the international boundary and was made without incident arriving about 4:30 p.m.

Tecate proved to be a quaint village of about 200 dwellings with the S.d.& Arizona R.R. running nearby. A small stream of water was flowing in the sandy bed of a river, up one road rose.

The whole hillside area was clothed in a chaparral of Artemisa sage, buck thorn and sumac and where conditions permitted along the stream courses, sycamores & willows were growing while a short distance away where the surface water was not flowing, large live oaks were found. This tree also was growing up the mountain sides in the ravines.

Birds were abundant and such species as An. Towhees, Calif. Jays, Linnets, Lark Sparrows, Green-backed Goldfinches, Phainopeplas & B.H. Grosbeaks were seen Phainopeplas were everywhere and were especially attracted by the presence of numerous Elderberry bushes in the canyon (black-berried variety). These also were very attractive to all the fruit-eaters, including the grosbeaks and jays.

Several large tule patches were seen in the river bottom & Red-winged Blackbirds were not uncommon. The place was ideal for Yellowthroats & Song Sparrows but as we did not stop these species were not seen.

After a long uphill grind we came out onto the high plateau - a dense chaparral of Adiantum & Redshank prevailed with the latter in much the greater abundance. Redshank occurs but sparingly north of the boundary, being found as far north as the Lagunas.

Where shallow valleys occurred in this plateau large groves of huge live oaks were found and just at dusk a half dozen Western Bluebirds and a Cooper Hawk were seen.

Crossing a small water course about 2 miles west of Nejc many Texan Nighthawks were seen and a Horned Owl flushed from an oak by the roadside as we drove along.

Two pairs of Poorwills were seen flush from the road in the dusk.

We camped about 3 miles northwest of Neji and after getting established for the night I set a line of traps thru the brush.

June 27 1924

I was awakened by the call of Valley Quail and as the day broke ash throated flycatchers were heard and a single Costa Hummer was seen.

My traps held 3 *Dipodymus* and a single *Peromyscus m. gambeli*. Spotted Towhees were heard nearby and a single male Purple Martin was seen coursing about in company of a half dozen Cliff Swallows.

We left the camp about 8 a.m. and soon were rolling easily down the long meadow centered valley in which Neji was situated. Stopping for information, I noted many birds Calif. Woodpeckers, English Sparrows, 1 pr. Martins, 1 pr. Nuttall Woodpeckers & their young on the wing. Ash-throated Flycatchers, Black Phoebe, Calif. Yellow Warblers, 2 red-tailed Hawks, Western Kingbirds, Brewers Blackbirds (abundant) 1 pr. Wood Peewees, W. Meadowlarks, Calif. House Finch (abundant), W. Bluebirds (in oaks), Bullocks Orioles and as we were ascending a steep uphill climb from the valley thru the chaparral I shot a Black-chinned Sparrow\* and saw Calif. Thrashers, Western Gnatcatchers. Many Phainopeplas and a pair of Red-shafted Flickers, Green-backed Goldfinches were seen occasionally as we bumped along. The country was of the high rolling type covered with a heavy chaparral. mostly red tops tho occasionally a small patch of adenostoma existed in the lower places near the dry stream courses sage brush was found while beautiful large live oaks were growing wherever suitable conditions prevailed.

Our next stop was at a ranch called Los Comrades and while Jose went in to ask directions, Mrs. Canfield & I kept a sharp watch for new birds. Ground squirrels were common and Cliff Swallows were seen flying about the ranch buildings, while several Calif. Jays were seen in the oaks nearby. A lone Rock Wren bobbed up and down while watching us from a nearby rock.

Our route from Los Comrades on ran down a canyon thru which a small stream was flowing.

A heavy growth of willows bordered the water course & as we came to an open glade a pair of Killdeer were seen

\* which on examining was found to be carrying food to young,

with a single young one which Jose topped out and picked up.

After a couple of hours we came to a few scattering yellow pine trees while a rocky mountain nearby was dotted all over with them.

Turning up over a steep road we crossed a dividing range which was clothed in Redshank and dropped into a beautiful little valley filled around the edges with pine trees. The lowest parts were green with meadow grass and too damp for pine to grow.

A pair of ravens flushed from the road side as we passed and Black-headed Grosbeaks were not uncommon.

Several pairs of Aclif. Horned Larks were seen.

Arriving at Rosa de Castilla we had our lunch beneath a beautiful grant live oak. Plain Titmice were feeding young and a pair of woodpeckers had their nest in an upper branch of a nearby oak.

Wild roses grew in profusion near the small stream and their fragrance permeated the air making our short stay most enjoyable.

The family that occupied the lone dwelling proved most hospitable and chatted a half hour while we rested.

After a short ascend we began descending and soon left behind all the Redtop and began passing clumps of Catclaw mesquite, however, this plant was not found abundantly until the next divide was crossed, and we began going downhill into San Rafael Valley.

La Huerta was our next stop and proved to be an Indian rancheria with small grass houses scattered over a cultivated area situated in the north east extreme of San Rafael valley. Large springs on the east side near the base of the mountain kept the fields verdant.

Zonaly the place was lower Sonoran for mesquites, several species of cactus and other heat loving shrubs had taken the place of the Redshank and sage.

We did not stop long enough to search for birds thru the fields but I saw Linnets, W. Kingbirds, Anthony Towhees, many doves along the fence rows.

Farther out on the open plain Bell spruces and a few scattered junipers were seen.

Arriving at Sangre de Christo a large tule swamp was found with mesquites growing abundantly where conditions were favorable. The place was typical, being composed of a good-sized ranch house, several outbuildings & barns with the large corrals, always to be found about a cattle ranch. Several pairs of Cassin kingbirds were seen & heard around the buildings and the usual colony of cliff swallows were present. A few red-winged blackbirds (a.p. neutralis) were seen flying about the tules, while a great many Brewers blackbirds were seen amongst the cattle which were feeding in the green meadows.

Just before reaching the place Mrs. Canfield saw what she believed to be a citellus of the round-tailed group.

Driving to the mesa a short distance south east of the ranch our road turned left, directly towards the nearby mountains.

This arid mesa looked extremely interesting to a trained mammalogist for Dipodomys tracks were everywhere and a lone antelope squirrel was seen scurrying to shelter as we passed.

The road was of course sand and a steady uphill grind which had its effect on the two Fords for they were soon boiling merrily. Five or six miles of this uphill mesa brought us to the steep western base of the mountain range and the road led right up the slope. There are but a few graded roads in this part of the world and the one we were now traveling was no exception for soon the Museum Ford began to spit & puff and within fifty feet the motor dies as the fuel was not reaching the carburetors. Checking the wheels with rocks it was found necessary to open up the load & pour one precious case of gasoline into the tanks before we could go on up the hill. I had no way of telling how steep the pitch was but by guess I placed it at nearly 25%. While filling up the tanks a pair of ravens & a single turkey buzzard flew past.

We had several very steep miles of uphill road tho it was not until the live oak belt was again reached that we had any trouble. Here a steep pitch stuck the Museum Ford and Mrs. Canfield got stuck in the sand.

We appeared to be upon the top of the mountain and traveling over a rolling country chaparraled with red top, adenostoma and scrub oak while along the ravines & stream courses live oaks were abundant tho the expected pines were not in sight.

They came into view when we crossed a low divide and the valleys seemed heavily forested with them tho the ridges were treeless, being covered with scrub oak & red top, manzanita & adenostoma and dotted profusely with worn granite boulders.

Just as we reached the first pine tree a lone roadrunner was seen carrying a small lizard which was still alive & kicking violently.

Stopping near a small grove of pines we saw the first mountain birds, white-naped nuthatches, Calif. Woodpeckers wood peewees & a singing ♂ black-headed grosbeak.

After several miles of northward travel, for we had reversed our direction of travel when leaving Sangre de Christo, a long green tule centered pine bordered meadow was reached and to my surprise many red-winged blackbirds were flying to & fro over the tules while Brewers were abundant on the meadow. Farther down I saw a coyote running thru the cattle that were feeding near the marsh and mixed with the cliff swallows which were flying abundantly overhead were several violet greens and a single martin. Driving on we passed thru several smaller meadows and finally I out-distanced Mrs. Canfield & stopped to wait for her to catch up. Fifteen minutes brought no results so I turned back & found her a mile away stopped with a shifted cargo - some of the goods had fallen off and after a check we found Jose's cot was missing so all of us started out on foot to search for it. Darkness found us still searching so returning to the machines we camped for the night.

June 28 1924

We were awakened by pinon jays this morning & they proved to be very abundant. While I was loading the Fords Mrs. C. found a pair of olive-sided flycatchers feeding young. Their nest was situated near the end of a limb about 75 ft. up in a large pine tree.

After packing up we again started out and came to the ranch house in about two miles.

A search of the premises proved it to be vacant so we could not ask about our way and after a futile search for a road that would take us to Laguna Hansen we decided to turn back to our camp site of the past night where we could await the arrival of the cattle men & have good collecting.

I had a couple of mammals & a bird left from yesterday to prepare & after this work was completed went hunting down the stream.

Birds were not common tho I saw a few of the following: mourning dove (2), Calif. jay (several) pinyon jay (common), white-naped nuthatch (several), .....-billed nuthatch (1), juncos (several), red-tailed hawk (1), red-shafted flicker (several), Cabrini's woodpecker (1), valley quail (2), ash-throated flycatcher (several), black-chinned sparrow (3) and as I was coming back to camp at dusk I had a long shot at an horned owl.

Arriving at camp I found Mrs. C. & Jose each with a fair bunch of birds tho the only one that I hadn't checked was a black-throated grey warbler in Jose's kill.

I spent the evening catching notes about the lantern for Wright.

June 29th 1924

The weather turned threatening today and thunder heads loomed up to the south & east with ominous rumbles and an occasional spatter of rain.

We did not go out today as the specimens from yesterday were yet to be prepared.

I set my flash camera this evening & after dark caught more moths for Wright.

When putting things away for the night just before retiring an immature gopher was caught running about under the Fords, another case of nocturnal wandering of this species.

June 30th

I finished up my specimens & spent most of the day getting my notes written.

Saw a condor fly over about mid-afternoon.

Later Mrs. Canfield and I went hunting. Western gnat-catchers were abundant, a new of the species' nest was examined and found to be ready for eggs.

The only new birds were W. chirping sparrows and linnets which were found to be breeding. Many green-backed gold-finches were seen and I saw a pair in the act of copulation which placed them as a nesting bird of the region.

While we were away a coyote came into the meadow near camp & Jose shot at it with his 410.

July 1st 1924

We were all busy with our skins until 5 p.m. when as a measure of reaction from the "all day" sitting position

in which we have to work, we all went hunting. This time we went north of camp towards the dry chaparraled hillsides. Several black-chinned sparrows were heard and one shot, it proved to be a male & was feeding young for its beak was full of small green worms.

Flickers were common and a pair of Cabrinis woodpeckers were feeding young in a hole situated about 25 ft up in a pine tree.

Close scrutiny of the manzanita thickets revealed much dipodomys work.

At dusk several Texan nighthawks were seen flying about.

Mrs. C. collected several young bluebirds that had just left the nest. They were extremely shy & keeping high up in the largest pines prone to use their wings. Horned owls were heard hooting late in the evening.

July 2nd 1924

We did not have enough birds to keep busy all day so went out for an hour's hunt.

Mrs. C. & I went back to the same place we had hunted in last night, while Jose went down the creek. I added two new birds to our list for this mountain when I killed a young San Diego wren and an adult Western Tanager. A pair of western martins were seen flying about a pine shrub but were too shy to get within range.

Jose added a new species to the list when he brought in an immature ♂ Costa Hummer. This I believe to be another case of lateral post breeding migration.

About noon I went over to my flash trap to cover up the powder as heavy cumulus clouds were gathering in the east which warned of an impending storm and upon my return I found the camp in turmoil for Jose had a long stick & Mrs. C. her gun and both were peering cautiously at the food boxes under the Ford. I soon learned the trouble as a hasty call proclaimed the presence of a large rattle snake in the grub box. We finally poked the reptile out & Jose pickled it in formaldehyde. About 2 o'clock the storm broke with a crash of thunder & we sought shelter under a nearby oak for our camp was situated under some very large pines in a very dangerous place for lightning.

In the evening I set a line of traps in the manzanita for Dipos. A screech owl was heard after dark.

July 3rd 1924

My traps held 13 *Dipodomys* and four rat traps Jose had set for chipmunks held 2 *Peromyscus t. martirensis*.

While eating breakfast a mockingbird flew into the trees overhead & on collecting it I found it to be immature; another case analogous to the hummers of post breeding lateral migration.

In midafternoon while we were all quietly at work my attention was suddenly arrested by the sharp warning note of the ground squirrels on the meadow and we all raised a searching glance. Mrs. Canfield was the first one to spy the cause of the commotion when she called my attention to a ♀ zone-tailed hawk flying just over the tops of the pines nearby. I loaded my gun & kept it handy but it was not until an hour had passed that I saw the hawk again. This time it sailed about for nearly 10 minutes before getting near me when I took 2 shots at it without results. I set a long line of traps thru the manzanita and about a dozen near the large boulders nearby.

July 4th

Celebration of the glorious 4th started shortly after 1 a.m. when the flash trap went off with a terrific "bang" and examination of the place this morning led me to believe that the visitor must have been a coyote tho I was far from feeling positive. My traps held 6 *Dipodomys* & 1 *Perognathus*.

We all went hunting after breakfast and returned about 10 a.m. with a few birds tho no new ones for the list. I shot 1 chipmunk & Mrs. C. killed 4. They were found feeding on the *Ceanothus* (?) bushes bear the creek.

Near camp during breakfast time I shot an adult plain titmouse. Mrs. Canfield captured 3 of a nest of 4 young juncos that had only today left their nest.

In the late afternoon I changed & reset the camera and while busy with it a turkey vulture was flushed from a nearby tree. Good by Bait!

I set my traps again thru the manzanita nearby.

A dusk several poorwills were heard & Jose was lucky enough to get a shot & kill one. It proved to be a ♀ *P. n. californica* & apparently was incubating as the belly was picked bare of feathers. The bird was seen feeding from a group of dead pine stubs & kept about 40 ft above the ground. The insects on which the bird was feeding must have very high this evening.



July 5th 1924

We made an eight o'clock start in one of the Fords bound for the large tule swamp thru which we passed when coming into the mountains. The place proved very favorable for collecting and several new species were added to the list - Brewer blackbirds were abundant & a large colony of San Diego redwings were nesting in the tules. San Diego song sparrows were not uncommon.

Several colonies of cliff swallows had their nests on the sides of large boulders tho they had all hatched & the young were on their way at this date. We inspected a small group of old nests that had been inhabited this season & found them fairly swarming with bed bugs.

Violet-green swallows were about in limited numbers and western martins were not uncommon but seemed to have different habits from the localities in which I have found them for they were not in a large colony but scattered all about in single pairs.

A pair of adult western red-tailed hawks were flying about accompanied by their three young of this season.

A pair of sparrow hawks had their nest in a large pine stub and Jose was fortunate in collecting a young just out of the nest.

We found young redwings in the tules and several were captured. Mrs. C. saw the young condor flying over again.

Three ravens were seen flying over the marsh & several western Kingbirds were seen about a group of dead trees. I set the traps thru the manzanita again this evening. A poorwill was seen & several heard but neither Mrs. C. nor I were able to get a shot. Several Texan night hawks were seen flying about but wild and did not get in range.

July 6th

My traps held 9 specimens - 8 Dipodomys and 1 Peromyscus t. martirensis.

We had a lot of specimens left from yesterday which kept us busy all day.

The flash trap went off at 2:20 a.m. this morning.

July 7th

While we were preparing to go to the marsh again I chanced to see the zone-tailed hawk flying thru the trees near my flash trap & set out in pursuit. After a long chase thru the forest I had a long chance shot & dropped my bird in

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a heavy manzanita thicket and it was not until Mrs. C. arrived was I able to find it.

Arriving at the marsh I went into the tules to search for young redwings while Jose went again to the east side & Mrs. C. hunted along the west side of the marsh.

I captured a good supply of young ones and Jose shot about a dozen birds including Brewer's blackbirds, redwinged blackbirds, flickers and a single ♂ Lawrence goldfinch which added another species to the list of the region.

Arriving at camp we started to work but were soon disturbed by 2 huge bands of sheep being driven thru the meadow.

Jose bargained with the shepherd for a young goat & we had to stop work to slaughter it.

The offalls were dragged away & four steel traps set around them. My flash trap was sprung at 11:55 p.m.

July 8th 1924

The steel traps were untouched this morning tho the intestines of the goat had been dragged away by some unknown animal.

We were all very busy with the material left over from yesterday. A young Say phoebe was seen on the meadow this morning and during the afternoon a great collection of buzzards assembled near the steel traps and one of their number got caught in a trap. We later cut off the broken leg and turned the bird loose.

A sudden swish thru the air attracted my attention and looking up I saw a prairie falcon dart at a buzzard. The falcon finally turned about and flew directly over my head making its identity unmistakably.

I set a line of mouse traps thru the manzanita this evening & reset the steel traps.

July 9th 1924

The steel traps held a large ♂ coyote which I gave to Jose and he received it with deep appreciation.

My mice traps held 7 Dipodomys.

We had planned to move over to Laguna Hansen today & after breakfast broke camp. One route led to the ranch

buildings at El Rayo, thence east thru the open pine forests until a meadow filled valley was reached. This place proved to be a most beautiful spot yet seen on the mountain and greatly reminded me of the Sierra San Pedro Martir which lays to the south, with the towering hills of worn granite boulders interspersed with pines. Up on the slopes of these hills a species of live oak, some scrub oak and the four-leaved pinyon pine were seen growing.

Birds were more abundant than I had seen them elsewhere and as we passed a large outcropping of granite boulders near the road, several rock wrens were seen adding a new species to the list.

Well up towards the head of the canyon a small running stream was found and many birds were observed. I saw what I firmly believed to be a small flock of pine siskins but was not absolutely positive of their identity.

Passing a fenced pasture and a large corral we drove over a low divide and had our first glimpse of the lake and beautiful it was with large granite boulders scattered around in the water like small islets, a large forest of Jeffrey yellow pines completely surrounding & rugged boulder covered hills forming the sky line.

Heavy black clouds were sweeping in from the west & north giving every prospect of rain before the day was over. Following the most recent automobile tracks we took the left fork of the road which followed the north shore of the lake, after about four miles driving we decided we were on the wrong trail so back-tracked and were arriving at the forks of the roads again. The mistake was mist obvious for a glance in the right direction we found the site of a former hunting camp. Meanwhile the storm had been gathering and rain was commencing to fall.

We sought shelter in a small hut where an hour was spent out of the rain which fell in a torrential downpour.

~~After the storm had passed we chose a campsite nearby & while Mrs. Canfield & I fixed camp, Jose skinned his coyote.~~

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Birds were very abundant and the chances for observation excellent as the lake would draw water birds as well as the others. In the evening we all went for a walk choosing the summit of a small rocky hill south of camp as our objective. For from this point we hoped to get an idea of the geography of the lake & vicinity.

An hour was spent on the hilltop enjoying a most delightful view and a gorgeous sunset. As we were returning to camp Mrs. C. spotted several canyon wrens hopping over a pile of boulders and together we collected three specimens.

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While making a place in which to work I saw a siskin feeding in the grass near the lake but it was so wild I was unable to collect it.

In the late afternoon Mrs. C. and I went hunting getting a fine bunch of birds.

Allen & Rufus hummers were abundant and I collected an immature costa near camp. Ravens were heard near the lake & 3 were seen being chased by western kingbirds near camp.

July 10 1924

We still had much work adjusting camp & the day was spent with the specimens from yesterday.

July 11th

I killed a couple of birds near camp to fill in the day's work tho most of the specimens prepared today were killed yesterday.

Great thundercloyds filled the sky today and I mad some pictures near camp.

July 12th 1924

We all went hunting near the small tule pond west of the main lake getting a fine lot of material. Several white-throated swifts were seen flying over the pond.

Arriving at camp about 10:30 we had just sat down to rest and have a few titbids when Mr. & Mrs. Abbott drove in.

The rest of the day was spent skinning.

Mr. Abbott walked around the lake in the afternoon and saw a couple of small bunches, probably broods of young mallard ducks. They were too young to have flwon any great distance & must have been raised on the lake. We set the flash camera this evening.

JULy 13th

The flash camera was heard explode at 5:20 this morning just after I had started the morning fire so I hurried off to bring in the plate.

Returning to camp I picked up several specimens. We had many specimens left from yesterday so no hunting was done today. We reset the flash camera this evening.

July 14 1924

Mr. Abbott & I started out about 9 a.m. to explore the country east of the lake.

And when passing an old dead tree near the lake a pair of duck hawks were seen. I took two shots at them but missed. Farther on a horned owl was flushed from its roost in a Jeffrey pine and tho we tried several times to get within range it always outwitted us. While trying to slip up on the owl a prairie falcon flew over me.

The Jeffrey pine forest seemed to give way to the pinyon forest suddenly for while there was nothing in the shape of a barrier such as soil conditions or rocky outcroppings or even a canyon we were suddenly aware that all the trees were Parry pines instead of the Jeffreys.

Red shank oaks & manzanita were also found when but a few hundred yards back the forest had been nothing but open yellow pines with an occasional open Parry glade.

And with the chaparral cover the usual birds to be found in its midst - black-chinned sparrows, spotted towhees & we saw a single thrasher (*t.r. redivivum*).

Reaching a range of rocky hills which seemed to rise high enough to afford a good vantage point we climbed up a rocky peak & while scrambling over the huge boulders a high pitched single toned call was heard, as Abbott & I were separated we each thought it to be the other until the call came too close to a whistle from one of us. When we searched the sky above we saw a beautiful xone-tailed hawk soaring high above. The flight reminded me of a red-tail and was not at all like the hunting flight observed at the other camp.

Returning to camp we collected several birds.

After lunch and a short resy Abbott & I again set forth going to the north east end of the lake in his Dodge car. Here we hunted about thru the woods for some much desired specimens for the taxidermist to take back to the museum on the morrow.

A small bunch of w. lark sparrows were seen & I had the good fortune to secure a young horned owl that was perched on a pine stub apparently out of sight. Pinyon jays were abundant there & noisy calls could be heard almost everywhere thru the woods.

July 15th 1924

Jose had received in his mail which Mr. Abbott had brought to him notice of his appointment as a delegate to the Union Pacific conservation committee meeting to be held in Honolulu July 31 - Aug. 4 and so had to leave this morning with Mr. & Mrs. Abbott.

I had a lot of skins left from yesterday's hunt so did not go out today.

JULY 16th

Mrs. C & I went hunting near camp this morning, getting a small bunch of birds. White-throated swifts were seen darting to & fro over the lake and about 15 terns were seen - 2 of which were Fosters & the rest black. Near camp I saw several immature violet-green swallows perched on the very tip end of dead twigs or branches. At first I gave but little thought to this perching position but I chanced to see an adult swallow dart directly at a young one, pause a fraction of a second without touching the limb, thrust its beak into that of the young ones and dart on its way, evidently that was the way the young were fed and I watched the operation many times afterwards. In some cases the young would quiver its wings as most young birds do when being fed but never did I see the old ones touch the perch or stop longer than a fraction of a second. In fact they seem to swoop up much as they do in normal flight when wishing to change their course. The feeding operation taking place when the apex is reached,

Several rat traps were set nearby for chipmunks. I looked at them about 9 p.m. & found a large ♂ *Neotoma i. intermedia* and a *Peromyscus*.

July 17th 1924

My traps held several more mammals this morning so but little hunting was done. We both went over by the pond to look at the flash camera and bring the small boat back to camp for repairing. When approaching the pond my attention was attracted by a sharp shrill note near the water's edge & a quick survey disclosed the presence of a Virginia rail near a patch of tules. I shot the bird & Mrs. C. who had just come up shot its mate.

In the later afternoon a large flock of pinyon jays came past camp & Mrs. C. shot six.

I spent the evening patching up the duck boat.

I did not see the terns today nor have I seen either Rufus or Allen hummers for the last couple of days. Where?

July 18th 1924

A family of killdeer were seen near the lake this morning. The young ones were fully as large as the adults tho the latter still called vociferously when I passed close by.

My rat traps held 2 *Peromyscus t. martirensis* and one *Peromyscus g. sonoriensis*. As I was walking over to my flash trap I chanced to see a young Virginia rail walking over the grass-filled water in the small pond west of Laguna Hansen. Not being able to get within range so I could use my auxilliary gun I killed the bird with a 12 gauge load. This definitely places Virginia rail as a breeding bird of this region & incidently marks the southernmost breeding station for the species on the west coast.

Another adult Virginia rail was seen skulking in the tules but I shot at it with my aux and did not kill it.

Returning to camp via the south side of the small lake I discovered some fresh mole work & shall set a trap for it today.

After completing the skins we went hunting & killed another bunch of pinyon jays and in the evening set a short line of mouse traps near the tule pond and the mole trap. The potent odor of mephitis was present in the air after supper.

July 19th 1924

My mouse traps held a single *Peromyscus b. rowleyi* but unfortunately the skull was crushed & the specimen was not saved, while the rat traps that had been kept baited for chipmunks held 2 *Peromyscus m. sonoriensis*.

I set out my gopher traps this morning and at noon found six specimens had been taken.

The specimens taken late yesterday kept us busy until late in the afternoon. We were interrupted once by the presence of 3 black terns on the lake which together we collected all three by team work & a small duck boat. We set a line of traps thru the sage & rocks south of camp.

As we were leaving to set the traps the familiar call of yellowlegs was heard from the lake & searching for the source two greater yellowlegs were seen winging their way across the pond.

I set the flash trap near camp and about 12:40 a.m. it was fired.

July 20th 1924

My traps held but few mammals this morning but to my surprise a *Dipodomys* was in the lot. This specimen also has the large ears & grey face of the ones taken near El Rayo. We went hunting this morning but found little of interest so returned to camp & packed specimens etc. The traps were again set thru the sage south of camp this evening. At midnight the flash trap was fired again tho the bait was only dragged away this time. Many fresh cow tracks nearby gave me a questionable feeling regarding the "varmint" that fired it off.

July 21st

My traps held 2 more *Dipodomys* this morning. After breakfast we went hunting thru the rocky hills north of the lake in search of mountain quail. The search proved in vain as far as the quail were concerned but we found black-throated grey warblers abundant & recovered some that had only just left their nests.

The western martins were extremely noisy today & it was thought that their young were on the wing so several were shot in hopes of killing some young ones. I am positive that some of the ones wounded were young but nothing but old ones were captured.

Traps were set again thru the sage this evening. During the night horned owls were hooting all about camp & I took 2 shots at a bunch of pine cones that in the semi-darkness looked exactly like a large owl on a dead limb.

July 22nd

Mrs. Canfield stayed in camp to skin while I went hunting mt. quail in the rocky hills north of the lake.

I had no luck with the quail tho I picked up a few more black-throated grey warblers & other common things.

I saw a large red-tailed hawk circling overhead and while stalking warblers in the pines my attention was attracted by the continued call of a duck hawk high in the air. I finally spied the bird but instead of one there were two diving and yelling at each other like two youngsters.

While watching the duck hawks I saw a splendid adult condor fly over. It was far out of gun range but low enough to see the white second airs of its wings. This was the first condor I was absolutely positive of its identity seen in this locality so far.

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Returning to camp I looked at my mole traps & found a fine specimen had been captured. Hooray!

As I passed a socky point on the lake shore near camp I flushed a spotted sand piper & shot it.

Mr. Irwin came past camp this afternoon & brought me 10 gallons of gas so we can now use the cars to go hunting & will be able to get into better territory.

July 23rd 1924

We had a few skins left from yesterday so did not go hunting and after an early lunch took the trap sack & guns driving about 7 miles north to a region where pinyons were to be found. Here we searched for mt. quail without success.

A heavy rain storm had just passed before we arrived & chipmunks were unusually active hopping about the rocks in lively fashion.

The traps were set thru the brush & rocks.

Returning after sunset I stopped at a sheep camp to purchase fresh meat & while I was talking to the shepherd Mrs. C. heard a screech owl chattering nearby tho she was unable to catch sight of it.

July 24th

We made an early start for the traps & found only pieces of two species when picking them up.

I went out over the brush covered hills searching for mt. quail while Mrs. C. hunted near the machine.

My trip proved to be a failure as far as the quail were concerned tho I did get a black-chinned sparrow & an adult horned owl. While I was away Mrs. C saw a fine zone-tailed hawk fly past & heard canyon wrens in the rocks nearby. She killed an Empidonax & a spotted towhee.

July 25th

During my spare hours I had reconstructed a small narrow wooden duck boat which had been laying out in the sun and had all of its seams opened up. I gathered and heated pine pitch which proved very good for stopping the cracks.

So after breakfast I started out to explore the lake taking only my gun and a few shells. The first thing of interest was about a half dozen ruddy ducks swimming in the

middle of the lake but were too wise or too wild to let me go within range. Several of them were in brilliant nuptial plumage. I searched carefully amongst the tules but found no evidence of their nesting.

During the morning I examined about a dozen tule patches, some of which were in shallow water & had been devoured by the range cattle but in spite of this fact I found 2 coot's nests with 1 and several eggs respectively. While in the larger more dense patches only an American eared grebe's nest with 3 eggs was found. The bird had first attracted my attention as I paddled up to the tules for she swam directly away and gave me a very critical looking-over before diving.

(End of notebook)

October 21st through Oct. 29th 1924  
trip to Yuma .

Oct. 21 1924

Left San Diego at 9:30 and arrived at Yuma at 6:15 after an uneventful journey. After dinner at a cafe we left for the ranch and just as I drove up under the umbrella trees a screech owl was seen perched on the lower branches. I hastily pulled Mrs. Canfield's gun out of the load and she shot the bird.

October 22 1924

I was awakened before sunrise this morning by the chirping of robins & in the early light I saw fully a dozen of them after figs in the nearby trees. Audubon Warblers were abundant and while Chipping Sparrows were still around in fair numbers tho they were not nearly as plentiful as they were four weeks ago.

After breakfast I went for a short hunt about the ranch. Gambel Sparrow were numerous and the boys on the ranch shot a Sharp-skinned Hawk for me.

A very few Vermivora alata were seen (1 or 2) tho none were obtained, and the presence of Western Gnatcatchers was detected in the cotton by the "cheering" call. The identity was later verified by sight of the bird. The most surprising thing was the taking of a Pine Siskin from the top of an Eucalyptus tree. The bird, when seen, was not identified but due to its strange appearance was shot.

A large flock of Juncos was found in a neighbor's cotton patch and Mrs. C. & I shot nearly a dozen of them. These seemed to be a variety and possible 3 in the flock. A Townsend Solitaire was collected near the cotton where it had been feeding.

Ed Hyzer came in during the afternoon & stayed until dark. He is camping in the mesquite near the main canal & has been down nearly 2 weeks.

In the evening we drove up to Potholes to set the flash camera. Returning after dark a careful watch was kept for poorwhills along the road but had no luck.

Oct 23 rd 1924

Mrs. C. & I went up to the lake above Potholes this morning and on the way looked at the flash camera. The bait & trip wire had been taken during the night tho owing to a dead battery the flash had not been fired.

Arriveing at the lake we found it had dried up a great deal in the past 4 weeks and in some places large patches of tules were high & dry.

A couple of game wardens were found camping nearby & while I was talking to them Mrs. C. shot a Sphyrapicus, the first of the season.

The Harris Hawks were in evidence and their cries could be heard from several directions.

Ducks were abundant and I saw Green-winged Teal, Mallard, Shoveler, Pintail & Baldpates in abundance.

I shot a couple of Teals but unfortunately they fell into the tules & were lost.

As I was quietly stalking thru the woods I chanced to look up in time to see a Duck Hawk perched on the top of a dead tree in range. I took a shot at it with a heavy charge of b.b's but did not drop him.

I looked carefully for Yuma Rails but found no sign tho Virginias were heard in the tules, as were Black-crowned Night Hawks & Coots.

Three Egrets were seen, 2 snowy & 1 American.

A poor old cow was found bogged in near the water's edge & we drove up the valley a mile to inform the cowboys at the ranch. Just as we stopped Ed came running in. He had been following the whole distance at top speed & was nearly exhausted.

Returning to the lake we went hunting again but found nothing of much interest. While we were gone Mrs. C. shot another Sphyrapicus & a Red-backed Junco.

We again went up to the flash camer about sundown. The battery was replaced & a new bait & trip wire installed.

On the return to camp we again watched for Poorwhills but saw none.

Oct. 24 1924

The flash trap was shot during the night & a close examination of the trail showed the presence of a skunk, a fox & 2 coons.

On the way to the lake where we planned to hunt Mrs. C. & I each secured a *Sphyrapicus*. When passing near the tules I shot a dark bird that proved to be one of the *passerella*. Imagine my surprise at the record of occurrence of this family in the region!

The bunch of ducks were present this morning tho a new species was seen when 10 Godwits flew close overhead. I was fortunate in getting close enough to a Harris Hawk for a shot this morning and dropped a fine large adult. Ed shot a sharp-skinned which I saved for the school collection & Mrs. C, shot a pigeon hawk.

while skinning birds in the yard this afternoon a single Cedar Waxwing flew into the trees & was collected.

The flash trap was set again at sunset.

Returning a night hawk (sp.?) and a poorwill were seen tho neither was collected.

October 25 1924

I was awakened this morning by a Hermit Thrush trying to alight on my nose. It frightened me and likewise the bird which flew off about 50 feet and settled on the ground, picking up my gun, which I always keep nearby, I collected the bird.

My flash trap was "shot" again this morning & the dam keeper informed me that it was exploded at exactly 7 p.m. last evening. Fresh fox, skunk, coon & wild cat tracks were in the trail, so it was impossible to tell which species had been "shot". The bait was again taken.

We then drove up to the lake for a short hunt. Ducks were more abundant than yesterday tho smaller birds were much scarcer than usual. Ruby-crowned Kinglets & Audubon Warblers were fairly swarming and sharp-skinned hawks seemed abundant as four were seen in a three mile walk.

Juncos were rather scarce in comparison with the abundance of the past few days.

Several Snowy & American Egrets were seen and I was able to slip up to one of the former variety as it was wading about in a small open pond, and watched it for nearly 10 minutes at close range.

The only new species noted this morning was 2 Greater Yellowlegs that were feeding in the shallow water. A small flock of Greenwinged Teal & Scaup ducks were feeding near and as soon as the Yellowlegs spied me under the trees nearby they sounded their warning call and immediately the ducks flew away.

A few tree swallows were seen flying over the pond. I set the flash trap again this evening.

October 26th 1924

The dam keeper informed me that the trap was fired at 6:30 last evening and tho I looked carefully for dog or domestic cat tracks I could not make them out tho there was an abundance of fox, skunk & coon tracks all about.

There were many birds left from yesterday's hunt so no effort was made to secure more tho as I was crossing the trestle at Potholes a canyon wren was seen hopping about one of the villager's wood pile. I shot the bird & received a sharp reprimand from the lady of the house, but I should care, it was a new bird to the Bard region!

The head gates were raised today and as a result, owing to the lowered condition of the river's flow, the dam was dry & I walked out on it.

The opening of the gates allowed the river to rush past in a narrow channel leaving large bare mud flats and over this soft mud many beaver tracks were to be seen where the animals had been playing about.

A peculiar looking bird was seen eating from a bunch of half ripe dates & upon collecting it proved to be a Calif. Purple Finch. There were 2 others with it but I was unable to get a shot at them.

This evening I set the flash again & took particular care in brushing the trail clean of any tracks or foot marks.

October 27 1924

This Morning the flash was again fired tho the dam keeper did not hear it. He did not retire until after 10 p.m. so the animal must have been later. I felt certain of the subject this time for only skunk tracks were found on the trail this morning.

Instead of going to the river bottom we went to the desert wash after sage sparrows. They were not as abundant as usual but we managed to get a few of each *canescens* & *nevadaensis*.

The best take was a fine Leconte Thrasher that I shot. This one was the first I have seen in this region tho while the country is not exactly a day's travel for them they ought not to be as rare as I have found them to be.

Ed Hyzer shot another Pigeon Hawk this afternoon & gave it to Mrs. Canfield.

Of my kill today I saved the best specimens of each sub-species of Sage Sparrow & a Rock Wren for the taxidermist at the museum.

I did not set the flash this evening as tomorrow I have planned to go up to Picacho.

Oct 28th 1924

Mrs. C & I drove up to Picacho today and as we were leaving the valley several Mt. Bluebirds were seen on a fence a few miles west of Bard.

As the bridge over the drainage canal was crossed, a muskrat was seen swimming in the water below but a shot failed to stop him and it made its escape.

Many rewinged Blackbirds & 2 Coots flushed from the tules when I shot.

The day was most pleasant and I had a fine time going over the old historic mining district making pictures, but only one bird was seen after the farming region was left behind & it was a plumbeaceous Gnatcatcher playing about the limbs of an ironwood tree in a desert wash.

As we were returning a small badger was seen near the road, I jumped out of the car & pursued with all my speed while Mrs. C. got her gun & followed. However, before she caught up I had killed the beast with a large rock while both beast & myself were going full speed ahead!

October 29th

Dawn broke with a leaden sky & a very dusty horizon to the westward which gave but little prospect for a good hunting day.

However, we went to the lake & upon our arrival found almost a dearth of birds. The wind had commenced & was blowing a gale. The most noteworthy event was the presence of hundreds of tree swallows that were coursing over the lake. The usual species of ducks were present tho there seemed a greater abundance of shovelers than before. Even the juncos that had been so abundant during the past week were missing and I saw but one and it was collected. This was also the fact regarding Gambel sparrows for I saw but three, where as a week past they were swarming. This phenomenon seems to be the usual procedure in this area before a storm, whether it be wind or rain. Mrs. C. collected a couple of red-naped Sapsuckers 1 of which I took for the taxidermist as it was a fine ♀ specimen.

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The most unusual event of the day however was at the ranch where Marvin Jones brought Mrs. C. a Palmer's thrasher which he had borrowed her gun to shoot. This is the second occurrence of this species in Calif. & within half a mile of where the 1st one was taken in 1916.

The wind blew most violently all afternoon & even the dozen robins which have been feeding regularly in the fig trees failed to come.

January 13 through 23<sup>rd</sup> 1925

Bard

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February 18 through March 2<sup>nd</sup>, 1925

Santo Domingo, Baja California

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April 27 through June 26<sup>th</sup> 1925

Northern Baja California

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June 26 through 29<sup>th</sup> 1925

La Gr4ulla, near Ensenada, Baja California

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August 11<sup>th</sup> 1925 - an uneventful day

January 13 1925

I left San Diego at 8 a.m. bound for a short trip to Bard. The day was delightfully cool and when passing thru the mountains between Decanso & Buckman Springs hordes of juncos were seen. They were congregated in large flock and never in my experience have I even seen them so abundant.

When crossing Imperial Valley the effects of a recent frost was much in evidence for all the leaves of the grape-fruit trees were shrivelled up.

The desert certainly has not the green aspect as of a year past (1923-24) for when large areas were seen at that time covered with verdant carpet nothing was now to be seen but the dried up stalks. However, that is the way of the desert and it might well be several years before the plants will again be green.

Several pairs of Yuma horned larks were seen when crossing the sand dunes. I arrived at the Colorado River six hours and fifty minutes after leaving San Diego. The shortest time I have ever made the trip.

The effect of the cold was very noticeable in this district for the leaves on the willows and cottonwoods had been frozen and had nearly all fallen.

Arriving at the ranch I found the severe winter winds had blown many limbs from the trees near the house & an umbrella tree of nearly 16 inches in diameter had been split in two. Birds were not abundant tho I saw a small flock of Gambel sparrows near the corral.

Jan 14 1925

I spent part of the day getting camp arranged. The day was warm and quiet so the birds were active.

Near the corral a fair sized flock of Brewer sparrows were feeding in company with a pair of Abert's towhees & a couple of dozen Gambel sparrows. Juncos were abundant and I saw one that I feel positive was a pink-sided in the trees near the house but the bird flew away before I could get a gun.

In the afternoon several white-throated swifts and tree swallows were seen coursing over the fields and a single Cooper's hawk flew close overhead.

In the late afternoon I loaned Marvin a gun & he soon returned with a Palmer thrasher. To my great stonishment! Evidently this species is either extending its range into

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Calif. or is a sporadic winter visitor to these parts. During the night a sharp rainstorm passed, and afterwards a cold wind out of the north chilled everybody to the very marrow.

Jan 15 1925

Ice was over half an inch thick on the water pail this morning. Shortly after sunrise a strong north west wind came up making collecting almost impossible. During the day I managed to pick up a few juncos nearby, one of which I feel certain to be a pink-sided.

About sundown I set the flash camera in a desert wash.

Jan 16th

Dawn broke with the cold north wind still blowing violently. In spite of this I set out on foot for a hunt towards the river. First I covered the main canal and after a mile traveled over the desert area I decided to turn back as only a single rock wren had been seen.

Enroute to the willow-cottonwood association near the river I looked at my flash trap which was not sprung. Skirting the canal I saw several w. ruby-crowned kinglets in the arrow weed thickets and a single western gnatcatcher was seen amid a naked limb of a cotton wood.

Entering the heavy woods near the river I saw 7 western bluebirds in the upper branches of a leafless willow and succeeded in getting one .

Birds were very scarce, tho Farallon cormorants were seen beating their way against the strong wind.

Following a large Alaskan hermit thrush that I had seen dart over the river bank I was suddenly arrested by the calls of many geese and to my surprise saw fully 200 greater snow geese flying up river far out of range. Returning to the woods I flushed a Cooper hawk & western horned owl but failed to get even a snap shot at either. Two turkey vultures were seen, one was beating up into the wind with unsteady flight while the other was perched on an old dead stub. A single red-naped sapsucker was seen & collected.

During my hunt the usual resident birds were seen, Abert towhees, roadrunner, Gambel quail, plumbeous gnatcatchers, verdins, mourning doves, meadow larks, etc.

Several Phainopeplas were seen in the mesquites, quarreling as usual over the possession of the various mistletoe lumps that held berries. While watching a pair of garrulous Phainopeplas I saw three mocking birds that also had claims on the food and were most outspoken about them.

Returning thru the fields I encountered several small flocks of Gambel sparrows & a flock of juncos while a single Lincoln sparrow darted to safety in a tumble of dead cotton stalks. As I turned the fence corner in the yard near the house I shot a western chipping sparrow.

About sunset Marvin brought in another Palmer thrasher. He had caught it in a figure 4 trap near the pond. He claims that the species is common.

A cotton picker that has established his camp in the brush nearby tells of a pet Palmer thrasher that feeds close about picking up the crumbs while he prepares & eats his meals. He told me that the birds of this species are vicious "fighters! Rather than game chickens!" for according to his tale another bird, tired to share the spoils with his pet one morning was pounced upon, seized by the nape with the beak of his pet and given a most severe thumping on the ground. The victim on gaining its freedom backed off and the two then jumped and sparred at each other with claw & beak for a couple of minutes and proved to be a most interesting spectacle. Finally one overcame the other & has held the camp as its own ever since.

Jan 17 1925

I scouted about the cotton fields just after sunrise this morning & collected a Mean's gilded flicker, a Salton single song sparrow & a Lincoln sparrow. A great bunch of juncos were seen but nothing but thumblers could be picked out. A small flock of Gambel sparrows was seen near the canal & several Lincoln sparrows were seen along the weed covered ditch banks. About noon I saw a single Vermivora in the salt bushes near the corral.

After lunch Mrs. C, & I drove up to Potholes where in conversation with Mr. Trenchard, the dam keeper, I was informed that in a recent trapping expedition near by he had captured 2 Bassariscus which he had sold to Van Rossem & Dr. L.H. Miller. This put me on my nettle & I borrowed

7 small traps from him & set them out in a rocky canyon 1½ miles n.w. of Potholes. Enroute to the trapping ground I stopped at the lake above Potholes. I was much surprised to find the body of water reduced to almost a pond and the tules which were formally well out in the water to be high & dry. 10 dead cows were scattered along the western shore where they had bogged down & died giving the general vicinity a most unsavory smell. Two Harris hawks were about and hordes of white-throated swifts were on the wing over the lake, while several hundred least sandpipers were running about over the mud flats. My chief desire was to kill a half dozen Gambel sparrows for bait but there seemed to be

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an absolute dearth of bird life thru the willows and I did not see a single one until a small Mexican woodchopper's cabin was reached a mile farther on.

While I was down on the lake Mrs. C. saw a fine blue pigeon hawk in the woods but could not get close enough for a shot.

At the woodchopper's cabin a lone ground dove was flushed and when chasing a small flock of Gambel sparrows I saw another Palmer's thrasher.

Jan 18 1925

I went over my steel trap line this morning & found a skunk in one of the sets. Not wanting the animal for a specimen I walked cautiously oh! very! cautiously up to the trapped beast, released the spring on the trap with my hand and let it out - all without any misbehaviour on the skunk's part, much to the astonishment of a young fellow that had gone along with me to see the fun.

I had some specimens left from yesterday so turned back to prepare them.

The only bird seen worthy of note today was a sharp-skinned hawk near Potholes.

Mrs. C, shot a leutesant warbler in the river bottom & at dusk Marvin brought her another Palmer's thrasher. Certainly this bird is well established within the bounds of Calif. now.

Jan 19 1925

I hurried over my trap line this morning & found that one set had been robbed of bait & the clear tracks of a ring-tailed cat were all about except in the trap. This animal had, after eating up all the bait, dinged on the trap which is a common coyote & coon trick when they are aware of the traps' presence. Sometimes it is necessary to make an entirely new set in a different location for the scent is a warning to all other varmints that come near later - regardless of whether the bait is fresh or not. However I was so pressed for time that I risked it one more night.

The afternoon was used to attend to some personal business in Yuma.

Returning a lone Wilson snipe was seen feeding in the drainage canal near Bard.

Jan 20 1925

I set a quail trap in the bushes north of camp this morning hoping to catch a dozen specimens for Jose. Linnetts were abundant near a neighbor's maize pile & I shot a dozen to use for bait on my steel traps as I expected that at least one would have to be reset and I had three more traps to get out. This trap line is set thru the rocky desert hills 1 mile north of Potholes and is a run of about five miles over a very rough road.

I was disappointed in not having a ring-tailed cat this morning but in the set that had been robbed yesterday morning I had a year old gray fox which was a nice specimen.

I trapped several miles north of the road today searching for another place to set traps but found very poor prospects. However, 2 more sets were made.

On my way home in mid-afternoon I saw 7 Canada geese on a sand bar in the middle of the river a mile below the dam.

After skinning my fox I looked at the quail trap and found it empty with none of the maize disturbed, surely this great covey of quail cannot be exterminated tho I am aware that they have been heavily trapped all winter.

My need for ringtails is so pressing that I offered a trapper at Potholes \$2.50 each for six specimens if he could obtain them for me before Friday and I do hope he will at least be partially successful.

Jan 21 1925

I looked over my trap line again this morning & found to my dismay that three of the sets had been disturbed and the bait stolen. I reset them & endeavored to place the bait in more inaccessible places by building up the sides of the sets higher with brush & rocks.

I believe woodrats or desert chipmunks were responsible for 2 of the sets but the 3rd I am positive was the work of a ringtailed cat.

Returning to Potholes I found the trapper and was sorry to hear that he had had no luck.

After lunch I hunted about over the neighborhood for a good-sized covey of quail and after finding one of about a hundred birds I moved my trap. It begins to look very doubtful whether I was going to be successful in getting a dozen live specimens for Jose or not as during the past

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season the quail all about have been trapped persistently with the result of near extermination in some places. Its too bad, for in 1915 quail were fairly swarming in the region.

I noted several western vesper sparrows & a large flock of w. chipping sparrows in the fields today.

A small flock of juncos were feeding nearby when I reset the quail trap & I shot three hoping to find more - shufeldti or mearnsi in the midst but only killed thurberi.

A small scattered bunch of tree swallows were seen flying in the late afternoon.

Jan 22 1925

The steel traps were empty again this morning and again 3 sets had been disturbed, 2 by rodents and the third by the ringtailed cat.

Evidently the species is very clever for this time the individual had crawled up a narrow ledge-like shelf that ran obliquely up over the set & had jumped down inside the rocks where the bait was placed for its four small tracks were close together inside.

I would give me great pleasure to catch this foxy little cat tho my time is getting very short.

Returning to Potholes I went over the trapper's line with him but again the same ill luck prevailed.

Another person taking an interest in the game had set 13 traps up the river and after returning from the trapper's line I went out with him in hopes of better luck but his only catch was a cottontail.

In all I had examined over 39 traps this morning with not a single catch.

The quail trap was again empty at noon so I secured another sack of maize from a neighbor's stalk & baited the trap heavily.

Red-shafted flickers were heard calling loudly this afternoon and when going to Bard for the mail I saw a large flock of mixed Brewer's & w. chipping sparrows. About sundown when going over to look at the quail trap I saw a w. red-tailed hawk perched on top of a leafless cottonwood tree in the fields.

The quail trap was empty tho the birds had gathered up all the maize on the outside but did not get inside.



Jan 23 1925

I made the rounds of my trap line again this morning & found that 3 of the sets had been robbed of bait, apparently by some small footed animal. I picked up all the traps as I intend to leave for San Diego tomorrow. The flash trap was also untouched so I guess the trapper who had captured four coons nearby in a single night had taken the animals that had been getting pictured. It was taken up also had luck in regard to the quail traps still persists as nothing but empty traps were to be examined this morning.

In the afternoon I moved the bunch to another locality where quail seemed more abundant and I hope to get enough this evening & tomorrow morning so I can start back for San Diego.

Jan24 1925

Quail traps empty & as there were hundreds all about I spent the whole day trying with several traps to catch what I wanted. during the day while passing thru a small date orchard near the quail traps I saw several Calif. purple finches feeding on the dried dates that had not been picked.

A sharp-shinned hawk was also seen.

Jan 25 1925

By good fortune 5 more quail were taken this morning & we set out for home.

February 18 1925

In company with Prof. Gallegos & Mrs. Canfield I left San Diego about 7 a.m. bound for Santo Domingo, Lower Calif., Mexico.

Mr. Gallegos rode with me in the Museum truck while Mrs. C. drove my Ford.

We passed the customs on both sides of the international boundary without difficulty and on nearing Rosarito, which is only a small ranch house situated near the sea, about 18 miles south of Tiajuana I chanced to see a mountain plover fly up from a point close to the roadside. Stopping and carefully scrutinizing the nearby ground I saw dozens of these birds running all about. An hour was spent collecting a small series of them for each member of the party.

Western vesper sparrows were noted near Descanso Bay as we passed & Ensenada was reached at 2:15 p.m.

After refilling the tanks with gasoline we drove on southward. 2 Cassin kingbirds were seen near the cultivated fields about 8 miles south of Ensenada and a short distance farther on a beautiful Ferruginous roughleg flew directly overhead, very low.

We stopped for the night under some fine live oaks near La Grulla Gun Club.

During the early part of the evening a pair of screech owls were heard in the trees near camp and the hooting of horned owls was heard in the distance.

February 19th 1925

We had our plovers to prepare this morning and a slight cold taken by me yesterday had turned decidedly for the worst. This resulted in Mrs. Canfield skinning both her own & my plovers. The weather too had turned for the worse for the cloudy sky of yesterday was solidly overcast at dawn this morning with promise of rain at any time.

Birds were numerous here - spotted towhees, Audubon warblers, Gambel sparrows and nearly all the winter birds of southern California.

A small band of juncos were seen about & I shot a ♂ which proved to be J. o. thurberi.

At noon we decided to spent the night at this camp so put up the big tent and a forntunate move it proved to be for shortly after dark it started raining and kept up the light showers all night.

Feb 20th 1925

Morning came with an overcast sky but I was feeling much better so we decided to press on. We left this camp at 9 a.m. with steep slippery roads over which to travel.

Crossing the divide before getting to Santo Tomas I saw several Passerella flying thru the narrow openings between large sumac bushes & longed for enough time to be able to collect a few.

Birds were scarce thru the rolling hill country between Santo Tomas and San Vicente tho as in the past I was extremely interested in the change of flora that takes place when nearing the latter locality. Instead of the artemisia of our California upper Sonoran - wild rose begins to be the predominant shrub & at this season was dotted profusely with deep pink blossoms. It seems to me that Nelson has extended the San Diegan faunal area in his works too far to the southward for while the roses are the first southern species of plant to show, several species of cactus soon followed and by the time San Antonio del Mar is reached the whole flora is different from anything in the San Diego region.

The only accident to mar the pleasure of the day was when Mrs. Canfield got stuck in a small mud hole at San Vicente. The newly purchased skid chains were wrapped around each rear wheel in a lump & jerked the car out in short order tho every one had muddy hands & feet.

Several western vesper sparrows were seen near here & a rather large flock of San Diego red-winged blackbirds. A flock of about 40 sage thrashers were seen near the wind mill 10 miles north of San Antonio del Mar and in the box canyon a few miles further south a good band of robins were flushed.

Arriving at San Antonio at 2:10 p.m. we had lunch & refilled the fuel tanks.

A run of 38 miles over very good roads brought us to Santo Domingo at sundown with just enough light to clearly identify a Harris hawk that flew over a field nearby.

We were royally welcomed by Miss Hamilton who owns the Red Rock ranch & here accepted invitation to a most delicious dinner served in elegant fashion will long linger in our memories. May she always prosper!

We stretched our tents under some large spreading pepper trees in the yard.

Feb 21 1925

We spent part of the morning arranging camp then all went hunting.

Resident birds were not abundant tho many of our northern winter birds were to be seen. Gambel sparrows, Audubon warblers, pipits, western vesper sparrows, turkey vultures, 1 Cooper's hawk, white Rosario thrashers, San Fernando woodpeckers, pallid wren tits, ravens, western red-tailed hawks, Cassin's kingbirds, Anna hummers, valley quail (abundant). Calif. Hays (1 pr.).

The greatest surprise of the day was seeing a beautiful Ferruginous roughleg flying over the fields. About sundown this bird was shot in the eucalyptus trees near the ranch and proved to be a fine adult in most beautiful plumage. This I believe to be the southernmost record for the Pacific coast.

Gallegos collected several robins from a small flock in the pepper trees & an Anna hummingbird. an Audubon warbler & a western gnatcatcher. During the day I shot a dark-phase immature red-tailed hawk & gave it to him. I set a line of mouse traps nearby for *Dipodomys* in the evening. The line skirted the road on which one side was the rosebush & cactus association while the other was bordered by plowed fields & corrals.

There seems to be some misapprehension regarding the exact locality of Santo Domingo it being declared by local residents that the name applies to this immediate vicinity owing to the fact that the very earliest mission - which was only a small one was situated on the north-east boundary of this ranch. The mission was afterwards moved about two miles farther up the river where the ruins are yet to be seen. To my mind this should be the Santo Domingo type locality of *Dipodomys peninsularis*, so to be sure of having a series of topotypes I will collect specimens from both places.

(Note- this Santo Domingo was later found to be the wrong locality for topotypes of *D. a. peninsularis* but 20 of the species were later described from the material obtained on this trip.)

Feb 22 1925

My traps held 1 Dipodomys, 1 Perognathus helleri, 5 Perognathus, 5 Dipodomys m. parvus, 1 Peromyscus e. fraterendus & several Peromyscus m. sonoriensis.

While at the breakfast table I saw another ferruginous roughleg fly into the eucalyptus grove & I was able to stalk & kill the bird. It was not fully adult so offered it to Jose who was happy to receive it.

During the day I shot a couple of birds from the trees near camp - 1 yellowthroat, a Hermit thrush and an English Sparrow.

This evening the traps were set in the river bed amid a flora that closely resembles our own southern Calif. Such common shrubs as laurel-leafed sumac, lemonade sumac, sage etc. were abundant.

Feb 23

The traps held 5 Dipo, 3 Dipodomys m. , (Huey's  
2 Perognathus , 4 Peromyscus m , & 1 omission)  
Peromyscus e. fraterolous.

I had enough to keep me busy all day for Jose had his 2 hawks to prepare & I did not have to divide the specimens. Mrs. Canfield found a single tail feather of a cedar wax-wing which shows that they get down this far at times.

Another surprise came today when Miss Hamilton informed me that white-winged doves are regular fall & winter visitants to this region and mute evidence of their presence was found under a pepper tree nearby where game is occasionally cleaned by hunters, for many white-tipped tail feathers of these doves were scattered all about.

The flash trap was sprung about 10:30 am and we all rushed out to see if the fleeing victim could be seen but nothing but a cloud of smoke was visible. The camera was removed & reset in the river bottom in the late afternoon. When setting it I saw a single white-throated swift flying overhead.

The traps were set thru the rosse - cactus association again this evening.

Feb 24 1925

My traps held a fair catch this morning, 3 *Dipodomys m. pawns*, 3 *Perognathus* , 3 topotype *Dipodomys* & one *Onychomys t. macrotus*.

The topotype *Dipodomys* are certainly a different mammal from the ones taken from the river bottom yesterday and it looks very much as tho the stay was going to be of longer duration than first planned.

After getting the skins up Mrs. C. & I went hunting. We found discernible birds, scarce but managed to pick up a few specimens two of which were new to our observations so far and were a Calif, purple finch shot from the trees on the ranch and a spotted towhee taken in the river bottom.

During the morning a barn owl was seen roosting in the pepper trees over camp & the call note of a cedar waxwing kept us searching for some time but we failed to locate the bird.

I set out all my traps this evening thru the same rose - cactus association as last night.

Feb 25 1925

My traps held a very poor catch this morning - 9 *Perognathus* , 2 *Peromyscus e. fraterales*, three *Peromyscus m. gambeli* & one *Dipodomys m. pawns*.

Just after breakfast a green-tailed towhee hopped right into camp & a Lincoln sparrow was collected nearby.

We had planned a trip to San Quintin and as this seemed as poor catch as we were likely to have we all made preparations for an early start as was possible under the present conditions and left camp about 9 a.m.

The sun was shining lightly giving the countryside a fresh aspect after the fog-drenched night.

The first thing worthy of note was seen after we were well out onto the San Quintin plain. A vast horde of birds were seen feeding amid the dry grass & turning from the road I drove into them and found a tremendous flock of green-backed goldfinches. Half a mile farther down a golden eagle flopped up from the reeking carcass of a dead cow where it had been feeding on carrion. This was the first time in my experience that I had ever actually caught this noble bird eating such fare.

Passing a ranch house we saw dozens of Lawrence goldfinches drinking from a water trough in the corral. Linnets were feeding in large flocks in an unplanted grain field.

The object of the day's trip was to study the cactus belt which lies to the eastward of the vast plain and we took the first road that led towards the hills.

On reaching these hills I was much impressed by the change of associations, in some cases almost complete for the side hills were clothed in roses, mesquite plants (agaves) and many kinds of cactus while the plains below were covered with low brush, sumac and some of the small species of cactus.

A thing of special interest was various examples of hillside exposure in the small canyons that ran east & west. The south slopes were cactus, briar mesquite plant covered while the north slope was chaparraled with buckeye and other non-thorny shrubs - surely the best examples I have ever seen.

Several surprises in bird life were found - Costa, Anna & Allen Hummers were fairly abundant feeding in the mesquite plant blossoms. Several pairs of Scott orioles were seen but far too wild for a shot which is not an unusual thing for the species. A pair of Mearns thrashers were seen but they too were extremely wild and I did not get a shot. A lone mockingbird was seen and a pair of Say Phoebes were seen feeding from the tops of the dead agaves. Audubon warblers were feeding amid the mesquite blossoms, in fact this plant is the main source of food for all the birds of the region at this season for even the ever present Zonotrichias were seen in the flower clusters. Black-tailed gnatcatchers were present thru the cactus but the greatest surprise was the presence of a lone Centurus which I was fortunate to collect.

Ravens were abundant & they too were seen feeding on the agave blossoms. Whether they were after bugs which swarm about the blossoms or eating the flowers I was unable to determine.

We drove down the length of the hills & turned up San Simcon canyon hoping to get far enough inland to secure some cactus wrens for as I have found to be true in the San Diegan region, the species is seldom if ever found within several miles of the coast. However, we failed to find suitable cover for this species nor did we get a single specimen all day tho an old nest or two were found in the cactus.

Lunch had been neglected in our hasty departure so we bought 9 hard boiled eggs from a small native ranch & thought we were extremely fortunate.

Returning to the cactus foot hills we searched again for Mearns thrashers & after a hard hunt 4 were collected. The birds were not uncommon but extremely wild & very hard to approach. I had another great surprise in the late afternoon when I saw a San Fernando flicker. The bird was so shy that I could not get close enough for a shot.

Mrs. Canfield ran onto a small bunch of sage thrashers & collected two. On the way to camp a poorwill was flushed from the road by our lights for darkness had overtaken us before the plains about San Quintin were left behind.

We arrived in camp well after dark so the traps were set thru the river bottom by lantern light. Two hunters that had come into the ranch for a short stay yesterday, went to the ocean at the mouth of the Santo Domingo river today & killed but three ducks which they gave to us for specimens. They were 1 Gadwall, 1 greenwinged teal & 1 ♀ shoveler.

Feb 26 1925

I had a fair catch this morning, 8 *Dipodomys*, 2 *Peromyscus m. gambeli*, 2 *Perognathus*, & the tail of a tiny *Perognathus* -maybe *P. pacificus*??? Who knows, but certainly worth more effort in that vicinity.

The specimens of the past two days were all unprepared so there was no hunting done today, in fact the only bird killed was a fox sparrow that happened to fall under the eagle eye of Mrs. C. as it was scratching in the leaves under the pepper tree near camp.

When after a bucket of water at noon I saw a fine red ♂ Calif. purple finch in the front trees near the ranch house.

The traps were set again in the river bottom.

Feb 27 1925

The traps were very disappointing this morning - 5 *Dipodomys*, 1 *Perognathus* & 2 *Peromyscus m.*

As I still had a few of yesterday's specimens left I did not hunt.

Traps again set thru the river bottom this evening & as I was returning after sunset a horned owl was heard hooting



from the cliffs on a precipitous hill nearby

Feb 28th 1925

My traps held 9 *Dipodomys* , 2 *Perognathus*, two *Peromyscus m. gambeli* & two small *Perognathus* which I hope to be *P. pacificus*. One of the latter was badly eaten by other mice and the other had a crushed skull so neither was perfect. A green-tailed towhee was found in the last trap & I gave it to Jose. Upon dissection it was found to be a ♂

Four Schuyler traps that I had set for chipmunks in the rose - cactus association held 1 *Dipodomys*, 2 *Peromyscus e. fraterula* & 1 *Peromyscus m. gambeli*.

Mrs. Canfield shot a Arizona hooded oriole from the pepper trees near camp.

The traps were set again in the river bottom association this evening. I looked at the traps by lantern light at 11 p.m. & found 1 perfect *Perognathus*, 2 *Dipodomys* and a *Peromyscus*.

March 1st 1925

My traps held 5 *Dipos*, 1 *Peromyscus* & 2 perfect *Perognathus*.

I shot a Lincoln sparrow from a small flock & gave it to Jose. He later called my attention to a pigeon hawk perched on top of a dead sumac. The bird's perch proved to be an advantageous for an easy stalk & I was successful in killing the bird.

During the day several purple finches & a sapsucker were observed in the pine trees near camp & Jose shot a ♂ yellow throat as we were eating our lunch. Hermit thrushes were still fairly common about both in the pepper trees & thru the brush.

After sunset a poorwill was heard, calling from the cactus covered hillside east of camp.

We commenced packing up after dark as tomorrow we start for San Diego.

March 2nd 1925

We made our departure from Santo Domingo at 9 a.m. with a clear beautiful windless day. Several Cooper hawks were seen as we sped over the sandy mesa indicating as did the occurrence of the green-tailed towhee that the northward migration had commenced.

Near the mouth of San Telmo River I saw a pair of Mearns thrashers on the cactus covered mesa but they were wild as usual & I could not get close enough for a shot.

We had lunch at the pump 10 miles north of San Antonio del Mar and while eating a good sized mixed flock of re-winged blackbirds were seen most of which were San Diego but to my surprise I was able to positively identify a dozen or more ♂ tricolors.

An uneventful afternoon brought us to Ensenada at dark where the night was spent at a hotel rather than undo our loads.

March 3rd 1925

We left Ensenada about 9 a.m. and after an uneventful journey save for the observation of a fine adult Golden Eagle near Rosarito we arrived in San Diego about 3:30 p.m. ending what I hope to be an extremely profitable trip.

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**NOTE:**

The following ten pages (1-10) is a draft of the previous 9 pages (8-16).

1925

Wednesday, February 18, 1925.

In company with Professor Gallegos and Mrs. Canfield, I left San Diego about 7 A.M. bound for Santo Domingo, Lower California, Mexico. Mr. Gallegos rode with me in the Museum truck while Mrs. Canfield drove my Ford. We passed the customs on both sides of the international boundary without difficulty and, on nearing Rosarito, which is only a small ranch house situated near the sea, about 18 miles south of Tijuana, I chanced to see a Mountain Plover fly up from a point close to the roadside. Stopping and carefully scrutinizing the nearby ground, I saw dozens of these birds running all about. An hour was spent collecting a small series of them for each member of the party. Western Vesper Sparrows were noted near Descanso Bay as we passed and Ensenada was reached at 2:15 P.M.

After refilling the tank with gasoline, we drove southward. Two Cassin Kingbirds were seen near the cultivated fields about eight miles south of Ensenada and a short distance further on a beautiful Ferruginous Rough-leg flew directly overhead, very low.

We stopped for the night under some fine live oaks near La Grulla Gun Club. During the early part of the evening, a pair of Screech Owls were heard in the trees near camp and the hooting of Horned Owls was heard in the distance.

Thursday, February 19, 1925.

We had our Plovers to prepare this morning and a slight cold taken by me yesterday had turned decidedly for the worst. This resulted in Mrs. Canfield's skinning both her own and my Plovers. The weather, too, had turned for the

worse for the cloudy sky of yesterday was solidly overcast at dawn this morning with promise of rain at any time. Birds were numerous here -- Spotted Towhees, Audubon Warblers, Gambel Sparrow, and nearly all the winter birds of Southern California. A small band of Juncos were about and I shot a male which proved to be Junco oreganus thurberi.

At noon we decided to spend the night at this camp so put up the big tent and a fortunate move it proved to be, for shortly after dark it started raining and kept up the light showers all night.

Friday, February 20, 1925.

Morning came with an overcast sky but I was feeling much better so we decided to press on. We left this camp at 9 A.M. with steep, slippery roads over which to travel. Crossing the divide before getting to Santo Tomas, I saw several Passerella flying through large sumach bushes and longed for enough time to be able to collect a few.

Birds were scarce through the rolling country between Santo Tomas and San Vicente although, as in the past, I was extremely interested in the change of flora that takes place when nearing the latter locality. Instead of the artemisia of our California upper Sonoran, wild rose begins to be predominant and at this season it was dotted profusely with deep pink blossoms.

It seems to me that Nelson in his works has extended the San Diegan faunal area too far to the southward for, while the roses are the first southern species of plant to show, several species of cactus soon follow and, by the time San Antonio del Mar is reached, the whole flora is different from anything in

the San Diegan region.

The only accident to mar the pleasure of the day was when Mrs. Canfield got stuck in a small mudhole at San Vicente. The newly purchased skid chains were wrapped around each rear wheel in a lump and jerked the car out in short order, although everyone had muddy hands and feet.

Several Western Vesper Sparrows were seen near here and rather large flock of San Diego Red-winged Blackbirds. A flock of about forty Sage Thrashers was seen near the windmill ten miles north of San Antonio del Mar and in the box canyon, a few miles further south, a good band of robins was flushed.

Arriving at San Antonio at 2:10 P.M. we had lunch and refilled the fuel tanks.

A good run of thirty-eight miles over very good roads brought us to Santo Domingo at sundown with just enough light to clearly identify a Harris Hawk that flew over a field nearby. We were royally welcomed by Miss Hamilton, who owns the Red Rock Ranch, and here accepted an invitation to a most bounteous and delicious dinner served in pre-Volstead fashion which will long linger in our memories. May she always prosper!

We stretched our tents under some large spreading pepper trees in the yard.

Saturday, February 21, 1925.

We spent part of the morning arranging camp and then all went hunting. Resident birds were not abundant, although many of our northern winter birds were to be seen - Gambel Sparrow, Audubon Warbler, Pipit, Western Vesper

Sparrow, Turkey Vulture, one Cooper Hawk, while(?) Rosario Thrashers, San Fernando Woodpeckers, Pallid Wren-tits, Ravens, Western Red-tailed Hawks, Cassin Kingbirds, Anna Hummers, Valley Quail (abundant) and one pair of California Jays were identified.

The greatest surprise of the day was seeing a beautiful Ferruginous Rough-leg flying over the field. About sundown this bird was shot in the eucalyptus trees near the ranch and proved to be a fine adult in most beautiful plumage. This I believe to be the southernmost record for the Pacific Coast.

Gallegos collected several robins from a small flock in the pepper trees and an Anna Hummer, and Audubon Warbler and a Western Gnatcatcher. During the day I shot a dark phase immature Red-tailed Hawk and gave it to him.

I set a line of mouse traps nearby for Dipodomys in the evening. The line started from the road, one side of which was the rose bush-cactus association, while the other was bordered by plowed fields and corrals.

There seems to be some misapprehension regarding the exact locality of Santo Domingo, it being declared by local residents that the name applies to this immediate vicinity owing to the fact that the very earliest mission -- which was only a small one -- was situated on the northeast boundary of this ranch. The mission was afterward moved about two miles further up the river where the ruins are yet to be seen. To my mind this should be the Santo Domingo type locality of Dipodomys peninsularis, so to be sure of having a series of topotypes, I will collect specimens from both places. (Note -- This Santo Domingo was later found to be the wrong locality for topotypes of Dipodomys agilis peninsularis, but two other specimens were later described from the

material obtained on this trip.)

Sunday, February 22, 1925.

My traps held one Dipodomys, one Perognathus helleri, five Perognathus, five Dipodomys merriami parvus, one Peromyscus eremicus fraterculus and several Peromyscus maniculatus sonoriensis.

While at the breakfast table, I saw another Ferruginous Rough-leg fly into the eucalyptus grove and I was able to stalk and kill the bird. It was not fully adult, so offered it to Jose, who was happy to receive it.

During the day I shot a couple of birds from the trees near camp -- one Yellowthroat, a Hermit Thrush and an English Sparrow.

This evening the traps were set in the river bed amid a flora that closely resembles our own of Southern California. Such common shrubs as Laurel-leaved Sumach, Lemonade Sumach, Sage, etc., were abundant.

Monday, February 23, 1925.

The traps held five Dipodomys \_\_\_\_\_, three Dipodomys \_\_\_\_\_, two Perognathus \_\_\_\_\_, four Peromyscus \_\_\_\_\_, four Peromyscus \_\_\_\_\_ and one Peromyscus eremicus fraterculus.

I had enough to keep me busy all day for Jose had his two hawks to prepare and I did not have to divide the specimens.

Mrs. Canfield found a single tail feather of a Cedar Waxwing which shows that they get down this far at times. Another surprise came today when Hiss



Hamilton informed me that White-winged Dove are regular fall and winter visitants to this region. Hute evidence of their presence was found under a pepper tree nearby where game is occasionally cleaned by hunters for many white-tipped tail feathers of these doves were scattered all about.

The flash trap was sprung about 10:30 A.M., and we all rushed out to see if the fleeing victim could be seen but nothing but a cloud of smoke was visible. The camera was removed and reset in the river bottom in the late afternoon. When setting it, I saw a single White-throated Swift flying overhead.

The traps were set through the rose-cactus association again this evening.

Tuesday, February 24, 1925.

My traps held a fair catch this morning - three Dipodomys merriami parvus, three Perognathus \_\_\_\_\_, three topotype Dipodomys and only one Onychomys torridus macrotus. The topotype Dipodomys are certainly a different mammal from the ones taken from the river bottom yesterday and it looks very much as though the stay was going to be of longer duration than first planned.

After getting the skins up, Mrs. Canfield and I went hunting. We found desirable birds scarce but managed to pick up a few specimens, two of which were new to our observations so far and were a California Purple Finch shot from the trees on the ranch and a Spotted Towhee taken in the river bottom.

During the morning a Barn Owl was seen roosting in the pepper trees near our camp. The call note of a Cedar Waxwing kept us searching for some time, but we failed to locate the bird.

I set out all my traps this evening through the same rose-cactus association as last night.

Wednesday, February 25, 1925

My traps held a very poor catch this morning -- nine Perognathus -----, two Peromyscus eremicus fraterculus, three Peromyscus maniculatus gambeli and one Dipodomys merriami parvus.

Just after breakfast, a Green-tailed Towhee hopped right into camp and a Lincoln Sparrow was collected nearby. We had planned a trip to San Quintin and as this seemed as poor catch as we were likely to have, we all made preparations for an early start (the earliest possible under present conditions) and left camp at 9 A.M. The sun was shining brightly, giving the countryside a fresh aspect after the fog-drenched night.

The first thing worthy of note was seen after we were well out onto the San Quintin plain. A vast horde of birds was seen feeding amid the dry grass and turning from the road, I drove into them and found a tremendous flock of Green-backed Goldfinches. Half a mile further on, a Golden Eagle flopped up from the reeking carcass of a dead cow where it had been feeding on carrion. This was the first time in my experience that I had ever actually caught this noble bird eating such fare.

Passing a ranch house, we saw dozens of Lawrence Goldfinches drinking from a water trough in the corral. Linnets were feeding in large flocks in an unplanted grain field.

The object of the day's trip was to study the cactus belt which lies to the eastward of the vast plain and we took the first road that led toward the hills. On reaching these hills, I was much impressed by the change of associations, in some places almost complete, for the side hills were clothed in roses, mescal plants (agaves) and many kinds of cactus while the plains below were covered with low brush -- sumach and some of the small species of cactus. Of special interest were the various examples of hillside exposure in the small canyons that run east and west. The south slopes were chaparraled with buckeye and other non-thorny shrubs. Surely the best example of this change that I have ever seen.

Several surprises in bird life were found. Costa, Anna and Allen Hummers were fairly abundant, feeding on the mescal plant blossoms. Several pairs of Scott Orioles were seen but were far too wild for a shot -- which is not an unusual thing for the species. A pair of Hearn's Thrashers were seen but they, too, were extremely wild and I did not get a shot. A lone Mockingbird was seen and a pair of Say Phoebe's were seen feeding from amid the mescal blossoms -- in fact, this plant is the main source of food for all the birds of the region at this season for even the ever-present Zonotrichia were seen in the flower clusters. Black-tailed Gnatcatchers were present through the cactus but the greatest surprise was the presence of a lone Centurus which I was fortunate enough to collect. Ravens were abundant and they, too, were seen feeding on the agave blossoms. Whether they were after bugs which swarm about the blossoms or eating the flowers I was unable to determine.

We drove down the length of the hills and turned up San Simon canyon hoping to get far enough inland to secure some Cactus Wrens for, as I have found

to be true in the San Diegan region, the species is seldom, if ever, found within several miles of the coast. However, we failed to find suitable cover for this species nor did we get a single specimen all day, although an old nest or two were found in the cactus.

Lunch had been neglected in our hasty departure so we bought nine hard-boiled eggs from a small native ranch and thought we were extremely fortunate.

Returning to the cactus-covered foothills, we searched again for Hearn's Thrashers and, after a hard hunt, four were collected. The birds were not uncommon but were extremely wild and very hard to approach. I had another great surprise in the late afternoon when I saw a San Fernando Flicker. The bird was so shy that I could not get close enough for a shot. Mrs. Canfield ran onto a small bunch of Sage Thrashers and collected two.

On the way to camp a Poorwill was flushed from the road by our lights, for darkness had overtaken us before the plains about San Quintin were left behind. We arrived in camp well after dark so the traps were set through the river bottom by lantern light.

Two hunters who came into the ranch for a short stay yesterday went to the ocean at the mouth of the Santo Domingo River today and killed but three ducks which they gave to us for specimens. They were one Gadwall, one Green-winged Teal and one female Shoveler.

Thursday, February 26, 1925.

I had a fair catch this morning -- eight Dipodomys \_\_\_\_\_, two Peromyscus maniculatus gambeli, two Perognathus \_\_\_\_\_ and the tail of a tiny Perognathus --

may be Perognathus pacificus? Who knows? At any rate, it is certainly worth more effort in that vicinity.

The specimens of the past two days were all unprepared so there was no hunting done today -- in fact, the only bird killed was a Fox Sparrow that happened to fall under the eagle eye of Mrs. Canfield as it was scratching in the leaves under the pepper tree near camp.

When after a bucket of water at noon, I saw a fine red male California Purple Finch in the fruit trees near the ranch house.

The traps were set again in the river bottom.

Friday, February 27, 1925.

The traps were very disappointing this morning -- five Dipodomys -----, one Perognathus and two Peromyscus -----.

As I still had a few of yesterday's specimens left, I did not hunt.

Traps again set through the river bottom this evening. As I was returning after sunset, a Horned Owl was heard hooting from the cliffs on a precipitous hill nearby.

Sunday, February 28, 1925.

My traps held nine Dipodomys \_\_\_\_\_, two Perognathus \_\_\_\_\_, two Peromyscus maniculatus gambeli and two small Perognathus which I hope are Perognathus pacificus. One of the latter was badly eaten by other mice and the other had a crushed skull so neither were perfect. A Green-tailed Towhee was found in the

last trap and I gave it to Jose; upon dissection it was found to be a male. Four Schuyler traps that I had set for Chipmunks in the rose-cactus association held one Dipodomys \_\_\_\_\_, two Peromyscus crenicus fraterculus and one Peromyscus maniculatus gambeli.

Mrs. Canfield shot a male Arizona Hooded Oriole from the pepper trees near camp.

The traps were set again in the river bottom association this evening. I looked at the traps by lantern light at 11 P.M. and found one perfect Perognathus, two Dipodomys and a Peromyscus.

Sunday, March 1, 1925

My traps held five Dipodomys, one Peromyscus and two perfect Perognathus. I shot a Lincoln Sparrow from a small flock and gave it to Jose. He later called my attention to a Pigeon Hawk perched on top of a dead sumach. The birds position proved advantageous for an easy stalk and I was successful in killing it.

During the day several Purple Finches and a Sierra Sapsucker were observed in the pepper trees near camp and Jose shot a male Yellowthroat as we were eating our lunch. Hermit Thrushes were still fairly common about both the pepper trees and the brush. After sunset a Poorwill was heard calling from the cactus-covered hillside east of the camp.

We commenced packing up after dark as tomorrow we start for San Diego.

Monday, March 2, 1925.

We made our departure from Santo Domingo at 9 A.M. with a clear beautiful windless day. Several Cooper Hawks were seen as we sped over the sandy mesa, indicating, as did the occurrence of the Green-tailed Towhee, that the northward migration had commenced. Near the mouth of the San Telmo River I saw a pair of Hearn's Thrashers on the cactus-covered mesa but they were wild as usual and I could not get close enough for a shot.

We had lunch at the pump ten miles north of San Antonio del Mar and, while eating, a good-sized mixed flock of Red-winged Blackbirds was seen - most of which were San Diego, but, to my surprise, I was able to positively identify a dozen or more male Tricolors.

An uneventful afternoon brought us to Ensenada at dark where the night was spent at a hotel rather than undo our loads.

Tuesday, March 3, 1925.

We left Ensenada about 9 A.M. and, after an uneventful journey, except for the observation of a fine adult Golden Eagle near Rosarito, we Arrived in San Diego about 3:30 P.M., ending what I hope was an extremely profitable trip.

April 27th 1925

In the company of Mrs. Canfield I left the Museum at 9:20 a.m. bound for various points in northern Lower Calif. on a collecting trip that is to be of over two months duration. She drove my Ford while I drove the Museum car.

Our trip had been planned some time but delayed for several unavoidable reasons & at the last moment. The U.S. Gov. placed an embargo on fire arms, however, Mr. Abbott was able to get special permission from the Federal authorities and when we made an appointment at the international boundary the officials were extremely courteous, even out doing the Mexicans who, in the past, have been most exceptionally so.

The Mexicans caused us no trouble or delay tho for a few minutes I thought that our loads were to be searched.

At the last "garito" or small guards house two miles out of Tiajuana Mrs. C. complained of a peculiar bumping noise in the car she was driving & upon inspection I found a broken spring. I left her in the other car & returned to the U.S. side where I had the spring replaced. The rest of the trip to Ensenada was made without incident except the observation of two Swainson's Hawks near Rosarito. They were perched on fence posts in the same field where the Mt. Plovers were found last February. The overcast sky gave promise of rain so the night was spent at the Hotel Hidalgo.

April 28th 1925

Two white-crowned sparrows were seen near the hotel at daybreak this morning & a Pileolated Warbler was in the back yard.

We left Ensenada about 7:30 a.m. bound for Santo Domingo.

Droppingg into the wide valley some 15 miles south of Ensenada many migrants were noticed near the roadside. Western tanagres, lazuli buntings, violet-green swallows, & perched in a tree about 100 yards from the road two Swainson's Hawks were seen. I stopped & srcutinized them carefully, debating in my mind whether to shoot them or not, finally giving up the killing idea as they would probably spoil before I had time to prepare them.

Farther on, near La Grulla Gun Club house I saw a most beautiful adult Cooper Hawk fly over the road directly in front of the machine. Mrs. C. saw a bright Scott Oriole & as we stopped on the summit to cool the Fords of the hard uphill climb from La Grulla, a lone band-tailed pigeon flew past. It seemed very much out of place flying over these chaparral covered hills!



A drizzling rain started falling making the journey miserable. The recent rains had not been enough to start the rivers running so the trip was almost without incident.

In the box canyon north of San Antonio del Mar many black-headed grosbeaks were seen and a few western tanagers & Townsend warblers, while a small mixed flock of violet-green & rough-winged swallows were seen coursing over a small pond.

When we were near Santo Domingo a lone sharp-shinned hawk was seen darting thru the bushes.

We were royally received by Miss Hamilton and accepted an invitation to a most bounteous dinner.

About 9 p.m. I set about 20 traps by the light of a flash light thru the brush by the roadside. My chief consideration was some toptype *D. gravynes*.

Later in the evening a poorwill was heard calling nearby.

april 29th 1925

My traps held 1 *Dipodomys gravynes*, 1 *Dipodomys m. parvus* & one *Perognathus*.

A few winter visitors still remained about the place - 2 robins, 1 Hermit Thrasher (sp?) & a flock of about 25 cedar waxwings.

A pair of linnets had a nest on a ledge over a cabin door while a pair of black Pheobes were feeding young in their nest placed up in the gable of the same building. Miss Hamilton complained of the beirds eating her oranges & showed me evidence in the shape of several that had been picked. I was at a loss to name the culprits but birds were certainly responsible.

We went over our goods & picked out enough provisions for a two weeks trip. Loading up one car we set forth for El Rosario about 11 a.m. after a last farewell tidbit of wine & cake generously given by Miss Hamilton. I was much surprised to learn of the U. of C. expedition being recalled post haste three weeks ago tho they must have expected to return for all their equipment was left at San Telmo.

Miss H. told me they had a fine collection including coons, striped skunks, meadow mice etc. taken at San Ramon for they did not stop at Santo Domingo.

Near San Quintin several pairs of W. Lark Sparrows were seen & many Calif. Horned Larks sprang up from near the road as I drove along.

Turning towards the hills south of San Quintin we were soon in the cactus country - the home of Mearn's Thrashers & Bryant Cactus Wrens, so a sharp watch was kept for nests of both species.

Stopping near the hills, Mrs. C. collected a young Mearn's Thrasher. This was indeed a surprise for the bird was fully feathered & evidently foraging for itself so they must have nested exceptionally early this season.

Many stops were made as we drove up the canyon to examine cactus wrens' nests but not one occupied one was discovered.

Returning to the ocean near Socorro, thousands of cormorants were seen flying over the ocean. They were too far away for positive identification however.

We arrived at El Rosario about 5:30 p.m. & after asking directions to Canyon San Juan de Dios turned up valley over a rough road.

Crossing a small irrigation ditch a five gallon can of gasoline was emptied into the car's tank and the can filled with water as the locality where I wish to camp is waterless. We traveled till dark & then unrolled our beds and crawled in too tired to fix a bit to eat, tho I did stir up enough energy to light a lantern & set about twenty traps thru the cactus.

April 30th 1925

I was out at crack of dawn after my traps which held one *Dipodomys* m. & 1 *Peromyscus* m. gambeli.

B. Cactus Wrens & M. Thrashers were singing all about & we were soon out looking for them. I found a single addled egg in a cactus wren's nest while Mrs. C. found a nest with 2 naked young & an addled egg.

M. Thrashers were fairly common & we shot three, all young. Desert sparrows were not uncommon & several pairs were seen.

After a much needed breakfast we packed up & when rolling up my sleeping bag a fair sized tarantula was shaken from its folds. Driving on up canyon we finally chose a camp site near the mouth of Canyon San Juan de Dios.

This canyon has a great forest of giant cactus growing in it and the prospects of good collecting seemed favorable. A couple of Townsend Warblers, an Arizona Hooded Oriole, a verdin, a white-throated swift, a violet-green swallow, a verdin & a pair of ash-throated flycatchers were seen near camp during the afternoon. The latter seem to have established themselves for the summer, choosing old wood-pecker holes in a cirio nearby for their nest.

After establishing camp we went to work on our skins finishing them just before sunset. I made a coyote set near camp in the sandy alluvial soil of the river bottom, amid several kinds of thorny brushes but no cactus. A poorwill was heard calling several times during the evening, but attempts to "jack light" the bird failed.

May 1st 1925

The traps held 12 more Dipodomys and the steel traps held a raven in spite of the fact that I was out early to gather up the bait in order to prevent these pests from disturbing the set.

Coyotes are evidently abundant for one mouse trap in my line had been untrapped and another had a deposit of dung placed there by these canines.

Mrs. C. went out after nests but found nothing in a two hour search. She saw w. warbling vireos, several black-throated grey warblers & collected a Mearns Thrasher & an ash-throated flycatcher.

I set my traps on a cactus covered bench at the base of the hills south west of camp. The soil was filled with round stones of various sizes.

Well after dark the poorwill was again heard & getting out the flashlight Mrs. C. caught the gleam of the bird's eyes while I struck the shot gun over her shoulder & killed the bird.

May 2nd

The ravens stripped the bait from my steel trap before 5 a.m. this morning & skipped out, nor did one return all day! Certainly wise birds & need but a shot or two to teach them their lesson.

My mouse traps were almost a failure last night as only one Peromyscus e. fraterculus & one Perognathus was taken.

Not having much work it was decided to try the new ladder in the saguaros up the canyon.

Not far above camp I found a cavity situated 16 ft up high in a giant cactus. It was partially filled with small straws & feathers while nearby the singing owner was seen as San Diego wren!

The cooing of white-winged doves had been heard in several directions from camp this morning, tho it was not until I was on the top of the ladder, up in a big cactus, that I had sight of one, as it flew past going up the canyon.

Cactus wrens were not uncommon thru the giant cactus, where their woozy-woozy songs could be heard almost any minute, but to see them was another thing, for they would get to a vantage point high up on a saguaro and had sighted danger disappeared long before I could get within gun range. This same situation proved to be the case with the flickers too and the only way we were certain of their presence was by their well known call.

Holes were scarce and tho some were found the best had been cut out either by other collectors or honey hunters, for some of the Mexicans make their scanty living in this manner and the saguaros harbor many colonies of bees.

The most unusual feature of the day was the discovery of a cactus wren's nest, built in a cavity near the top of a giant cactus. It contained 2 fresh eggs & was left for more. Mrs. Canfield later found a nest situated about five feet up in the notch of a saguaro. Examination revealed 2 heavily incubated eggs. A very short set but the birds could hardly be blamed for not raising more young in such a desolate country as this. Think of feeding or having to hunt for food to feed five or six hungry mouths! The saguaros were in bloom & an abundance of Costa Hummers were feeding on the sweet scented flowers.

A single mocking bird was seen flying about the cactus tops and I wondered what could keep them alive here.

Feeling somewhat exhausted I looked at my watch & discovered I had been going up the canyon for over five hours carrying the now heavy ladder & a shot gun, so the ladder was cached near a large saguaro and we started back towards camp.

Returning I saw a ♂ Phainopepla & Mrs. C. collected a ♀ Arizona Hooded Oriole, a white-crowned sparrow & a linnet.

Near camp a pair of black-tailed gnatcatchers had been under observation for the past couple of days. I had been

of their ability to sing but it was not until this day that I had the pleasure of hearing the song and quite a cheery bit of a song it was. Given by the bird perched on the uppermost twig of a bush with its head raised vertically towards the heavens. This was a nice experience in my acquaintance with black-tailed for in 10 years experience I had never heard them sing before.

We arrived in camp about 3 p.m. a mighty tired bunch & thirsty. Tramps of this sort go rather mad on the participants when living in a dry camp with the only available supply of water 20 miles away & only 2 canteens & an oil can of water in camp. Today was the exception to our rules & we had two full cups of water each for lunch.

I set the mouse traps near camp this evening & the other pair of coyote traps were put in a trail 50 yards east of camp. This site was Mrs. C.'s choosing as she was certain my other set was in the wrong place. We looked over the mouse traps at 10 p.m. & found five *Dipos.* & a *Perognathus m. gambeli* had been captured.

May 3rd 1925

The mouse traps held 7 more *Dipos.* this morning & two traps were missing probably taken by some marauding varmint.

On looking at the steel set made last night I discovered three traps missing & sent in an alarm. This seems the quickest way to arouse the person who sleeps in the tent & before I had my mouse all picked up, Mrs. C. had the trapped animal trailed down & was proclaiming volubly its location & identity.

I arrived at the scene to find a fine ♂ coyote caught in two traps a front foot in one & hind foot in the other, both on the left side. The animal barked & yelped several times when cornered. This is very unusual for trapped animals are more often sullen & vicious. This certainly gave me a full day's work. when returning to camp two ♂ Western Martins were seen & several violet-green swallows flew over camp at breakfast time.

Mrs. C. went out on the mesa while I skinned the coyote & found a brown-headed flicker's nest in a lone saguaro west of camp. The old ♀ bird was prone to leave the nest and sat at the entrance with her head out of the hole taking in the situation. She realized how safe she was for the ladder was 4 miles up the canyon and my shoulders are far too sore to pack it back today!

About 3 this afternoon we stopped work & drove down to El Rosario for water. Near the town a Say Phoebe was seen & a lone prairie falcon was observed circling near the hills. I took a long shot at a red-tailed hawk that was perched on the top of a dried mesquite plant.

Arriving at the first ranch house we were assailed by a half dozen children with half of a 5 gallon can full of birds' nests. Evidently the news of a Museum expedition had had but one effect - after Bancroft's remarkable offer 2 years ago!

The sets were mostly song sparrows in all sorts of conditions from incomplete sets to 2 or three sets in the same nest, some broken, some almost hatched!

One little fellow who seemed more intelligent than the rest, tho he could understand no English, got quite excited on the subject & when we started for the river hopped on the running board. When I stopped near the irrigating ditch to fill the water cans he dodged into the willows & brought forth a Rosario thrasher's set. He then darted for his house & wasn't long in returning with a whole collection - chats, least vireos, roadrunners, wren tits, song sparrows & yellow throats. In all there were 7 sets that were perfect & Mrs. C. gave him a dime (U.S.A.) each with which he was more than delighted.

I suppose that all Rosario will turn to bird egg hunting when the camp is moved down there. Returning to camp at sunset another raven was found in my steel traps. I reset both traps & strung out a line of mouse traps thru the river bottom ending up on the edge of the mesa.

May 4th 1925

I had another coyote this morning and with a small bunch of stuff from yesterday's catch my day will again be well filled. The mouse traps held four species this morning but lacked numbers - 4 *Dipodomys*, 1 *Peromyscus m. gambeli*, 1 *Peromyscus e. fraternalus* & 1 *Perognathus helleri*, the latter 3 were taken near the edge of the mesa in the agaves.

A white-crowned sparrow was shot near camp this morning but fell into an agave and was lost.

Mrs. C. went hunting & killed 2 San Diego wrens (an adult & young) and brought me a nice bush rabbit with a perfect skull. Nothing is wasted of specimens of this

sort for the meat is saved for the larder.

The only birds she saw of unusual occurrence were several pileolated warblers.

The coyote carcass skinned yesterday disappeared during the night - guess its a case of wolf eating wolf.

The evening the carcass was pegged down & two traps set near it & the usual trail set was much again.

The mouse traps were set on the bench about a quarter of a mile west of camp.

May 5th 1925

My traps held a poor catch this morning & I am satisfied that the large kangaroo rat - *D. gravynus* found farther north does not occur this far south. The traps held 2 *Dipos.*, 2 *Perognathus* & one *Peromyscus e. fraterculus*.

The steel traps about the carcass were undisturbed nor did anything venture near but the trail set had one trap sprung by a coyote. The only reason I can concur for not catching him is that the trap must have been buried too deep.

As I was going out to pick up my traps at 4:50 a.m. I saw a coyote near camp. He seemed rather surprised at my presence. After an early breakfast we started out for the saguaros taking my 5x camera as I wanted to make a photographic record of some of the fine large specimens.

While crossing the brushy canyon floor a half mile above camp a pair of black-tailed gnatcatchers accosted and soon their beautiful little nest was found - situated in the middle of a partially dead bush. The handsome structure was just ready for eggs so a white marker was tied on the top of a bush nearby so that if either of us returned thru this locality within the next few days the nest could be located.

Arriving at the giant cactus grove we started out to hunt. Cactus wrens were singing as usual in every direction but so wild that to catch a distinct glimpse of a fleeing bird was exceptional. A pair of W. Martins evidently have decided to make some recess in the top of a tall cactus their summer home & the singing male flying overhead recalled to me the pines high up in the mountains, rather than a sun scorched cactus covered landscape. Violet-green swallows were fairly common today and several Arizona hooded orioles were seen. The presence of these birds in mated pairs would indicate but one thing to me and that - the presence of palms in the close proximity & have I longed for a good saddle animal on a road up the canyon so the upper reaches might be explored - but the returns were too few to take such 10 mile hikes on foot.

A pair of brown-headed flickers and a single Centurus were much in evidence by their calls, tho I did have a long chance shot at one of the flickers but was not successful. Mrs. C. fared the same luck but more unfortunate for a casing broke off in the breech of her gun & a flicker objected within 50 feet of her when she could not shoot. The pair of red-tailed hawks observed last time were again seen near a small branch canyon mouth and my attention was drawn towards the soaring ♂ by his repeated calls. Suddenly the reason was obvious for his mate was seen coming swiftly across the main canyon with something in her talons. She was too high up for me to be certain pf what she had but she was not too far away for me to plainly note the position in which she carried it for her feet were extended straight out back under her tail & not drawn up, folded as one would expect.

After a wide circle or two she was joined by the male & they flew into the small canyon out of sight. They must have had young in a nest somewhere nearby for they were always, during the rest of the day, to be seen soaring over the same small canyon.

While I was photographing Mrs. C. ran onto 2 pairs of San Fernando woodpeckers and by stragey we managed to get them all!

We wandered about the canyon all day with but small returns for the efforts. Several pairs of flickers were located, but by all knwon tricks neither of us was able to get within gun range. Mrs. C. did pop a couple of cactus wrens that she crept up on & I shot an Alaskan Yellow Warbler & a ♀ Sparrow Hawk.

I later found the Sparrow Hawk's nest high up beyod the ladder's reach in a cavity near the top of a huge saguaro. The male hawk was heard screaming & catching sight of him flying overhead I saw a lizard dangling from its talons. He flew straightfor the nest with quivering wings as if he had achieved a wonderful feat in the struggle with the serpent.

The return to camp was arduous labor for with the camera & tripod in addition ot the ladder we both were heavily loaded.

Near camp a pair of extremely wild shrikes were seen.

The coyote trap set near the old carcass held a buzzard which was turned loose.

I reset both pairs of traps this evening, using all the



bait I had on one set, placing the other as a blind set in a trail.

The mouse traps were strung out near camp.

May 6th 1925

The mouse traps held a very light catch, 1 Perognathus, 1 Peromyscus e. fraternalus & a couple of Dipodomys.

The steel traps held a coyote caught by the left front foot. It proved upon killing to be a male & fairly swarming with fleas. Gee, what a job for the "Rat Skin Maker"!!!

Mrs. C. picked up a W. Warbling Vireo & a San Diego Wren as she had a couple of the latter she gave this one to me.

I did not set the mouse traps this evening as tomorrow we leave for Aguaito for a short stop.

I did put a few bird bodies on the coyote traps that had not been disturbed last night.

May 7th

A coyote was caught last night & found attached in the traps, some hundred yards from the place of setting. This time it was a female & caught by the left front foot. This animal also was crawling with fleas.

A Barn Swallow about camp this morning & I shot it. While preparing my tools for the coyote skinning, a Verdin came to a nearby bush and Mrs. C. shot it for me.

The fleas from the two last coyotes were just about taking the camp and it was with a sigh of relief that the place was left about 2 in the afternoon.

Aguaito, the place of our next stop is situated at the head of a long canyon that branches from El Rosario Canyon five miles east of the town.

A very heavy stand of mesquite plants were growing on the canyon floor extending almost to Aguaito while over the hills creosots were abundant with an occasional giant cactus. The apparently leafless cirios on the skyline gave the appearance of a logged or burned over forest with only a nude tree trunk standing here & there.

Arriving at Aguaito at sunset I lost no time getting in a little work setting out the mouse traps. A small spring of alkali water trickled for a hundred feet over the sides in a narrow gorge. How good it seemed to be able to plunge hands and face into plenty of soapy water again! I shot a Pileolated Warbler near the spring.

May 8th 1925

My traps held 3 *Peromyscus m. gambeli*, 4 *Perognathus* & six *Dipodomys*. As I was picking them up a raven flew over and alighted a hundred yards down my trapline, not suspecting what the vandal was doing I did not immediately rush there but upon my ultimate arrival, when he flew up, I found the largest & best *Dipo* of the night catch pecked to pieces. Shot gun for that raven next time!

Birds were not abundant about this waterhole tho a couple of pairs of *Phainopepla* and a few mourning doves were seen.

While we were preparing specimens in the roof-less room of the old adobe ruin a lone ♂ English Sparrow alighted on the top of the wall & chirped as tho he had found a friend. I looked for my gun without moving my body for fear of frightening the bird but found I had left the weapon outside the door. Seeing me move the sparrow flew and when I reached outside for my gun I found the bird perched on the ladder which was still fastened to the Ford & he was chirping volubly when I shot him.

The way these sparrows have moved down the peninsula is amazing for in 2 years they have moved from place to place & increased enough to spread south over 100 miles.

In the late afternoon I shouldered the ladder while Mrs. C. took the shot gun & together we set out to examine all the giant cactus within walking distance of the place.

Two hours' work netted nothing but two tired & weary people & the knowledge that Bancroft had chopped out every hole in the giant cactus for miles around.

While I was at work early in the afternoon Mrs. C. went hunting. She killed a small woodpecker and heard a pair of wrentits & a San Diego Wren.

May 9th 1925

My traps held a disappointing catch this morning - 2 *Peromyscus e. fratulus*, 1 *Peromyscus m. gambeli*, one *Dipodomys* and one *Neotoma i. intermedia*.

While Mrs. C. prepared breakfast I put up the few skins & when the meal was over we packed up as fast as we could & left bound for the next collecting station, El Rosario. En route all the giant cacti, near the road were inspected with no results.

When stopping for lunch about half way down the canyon I shot a pair of wrentits. These birds proved to be immatures

when they were skinned & were a pair and proved interesting by reason of their being paired off at this early age. Evidently the pairing instinct in this species is as much for companionship as for breeding purposes for these birds would not have nested until next spring. The species is known to be mated for life as with several other chaparral loving birds & evidently make an early start.

About a dozen white-throated swifts were seen sporting about a steep dirt cliff in the canyon. As we drove into the river bottom a mile or so west of the junction of Aguaita Canyon a Coopers Hawk flushed from a bush near the roadside. Having my gun across my lap & loaded I gave him a broad side breaking one leg with the straight down but not incapacitating beyond his disappearance.

We arrived at El Rosario late in the afternoon & pitched camp in the river bottom about 1 mile east of the village. We had hardly stepped out of the machine at the chosen camp site when the Mexican lad that had brought the bird nests to Mrs. C. came running in with 14 live gophers in a cooloil can. The animals were uninjured and I marveled at the boy's ability to catch them without violence.

I later learned that they keep one live gopher & digging out a hole turn the captive in, soon as the occupant of the hole discovers an intruder a fight commences and they both come to the surface for more room and are captured. Needless to say I did not set my traps this evening for a full day's work was already on hand with the gophers.

A splendid stream of water ran near the camp & the surrounding willows were swarming with birds - yellow warblers, least vireos, wrentits, chats, song sparrows, while overhead rough-winged & barn & cliff swallows were not uncommon, with an occasional white-throated swift.

Ravens were abundant, sailing about in search of some dead beast,

May 10th 1925

Chats sang all night but this I believe was on account of the bright moonlight.

Busy nearly all day with my gopher skins & bothered considerably by a dozen native visitors (34 to be exact) who sat about on the ground & jabbered, picking up each article within their reach! Guess we'll have to be very careful about all loose things.

I set my traps near the creek this evening where I, during the late afternoon, had found what I believed to be a *Microtus* colony. 5 were set in the sandy river bottom as I was returning to camp. I also set my steel sets - one

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the river for coons & the other near a trail for wild cats. A lone black-crowned night heron was seen flying up the river at dusk

May 11 1925

My traps were a sad disappointment this morning as only a half dozen *Peromyscus m. gambeli* were taken.

I went hunting getting a few birds, least vireos & chats were abundant. The latter giving me several "thrills" as for the first time I saw the nuptial "song flight" given.

The male would perch on the uppermost tip of a willow sapling & given the usual short song, then launching forth into the air would run almost vertically perhaps 50 or 60 feet thru in a wild burst of song would drop by steps raising the wings with quick beats until they struck with an audible slap over his back singing all the time. The whole performance lasted but a few seconds in fact just enough time for the song to be given.

After getting up the few skins I went down to the river searching for a good place to set my traps. A very light blue marsh hawk flew over and later after I had fired two shots at an Anthony green Heron, a duck hawk was seen soaring high overhead searching for a victim.

Swallows of three varieties were flying about, barn, rough-winged & cliff. I all probability they all nested in this vicinity.

I set more mice traps near the water source.

May 12th 1925

My traps held several harvest mice, several *Peromyscus m. gambeli*, two *Peromyscus c. insignis* and a shrew. The latter animal is an extremely rare species.

The presence of *Peromyscus c. insignis* here was a surprise and I hope that they are not responsible for the runways that I thought to be *Microtus*.

I went afield in search of better trapping grounds & to hunt after I had looked at my traps.

About half a mile below camp I found a large tule patch & several pairs of red-winged blackbirds nesting. I shot at a beautiful ♂ & tho I missed I was amply rewarded for the cackling of a Virginia Rail resulted from the sudden noise. The presence of this species here at this season would indicate but one thing - breeding and the southernmost record station. Thos I should like to secure a bird to make certain.

I changed one of my steel traps placing it in the creek

this evening. My mouse traps had been left out & were rebaited at sunset and on the way back to camp I shot 3 Texan Night Hawks.

I saw a single Vaux Swift when after a bucket of water but unfortunately had no gun.

May 13th 1925

My traps held but a very few animals this morning so I started down the river on a trip of exploration searching for red-winged blackbirds, yellow-throats & wrentits.

Coon tracks were on every trail and coyote, wild cat & large skunk tracks were not uncommon. It certainly seems odd that I seem unable to catch any of them! I also kept a sharp watch for indications of *Microtus* but beyond the observations already made I found nothing new.

Red-wings were found in scattered pairs along the river where ever tules were growing tho finally I ran into a large colony & picked up a nice bunch. The voices seemed to differ from that of our blackbirds about San Diego & upon close scrutiny of the series I believe them to be different from the birds near the international boundary.

A yellow-throat was seen doing the "broken wing & leg" stunt and searching about I found the nest with 4 eggs nearly hatched. This was the first time I ever saw this shy species act in that way. Black Pheobes were not uncommon along the creek & several pairs were flushed from w weed patch as I passed by.

In the evening I picked up about half of my mouse traps & reset them thru the fields & damp meadows farther down, tho I saw nothing that gave any further indication of *Microtus*.

I moved one steel set, resetting it near the fields. The traps were removed & 2 sets made.

Texan night hawks were rather abundant and a few small bats were flying as I was returning to camp about dark. Also a barn owl flew past, close enough for me to be positive of its identity.

May 14th

My traps held several *Reithrodontomys* and a couple of *Peromyscus c. insignis*. The runways discovered must certainly be made by this species tho in all my experience I have never seen them cutting up grass in short lengths within trails or building trails. I picked up all the mousetraps. My steel traps were empty.

As I was searching about in a weed patch I heard a noisy commotion in the air overhead & looking up saw the broken-legged Coopers hawk flying over with a bird in his good talon & a dozen redwings & kingbirds in hot pursuit.

The way it acted I felt sure that it had a mate & a nest nearby. It certainly was a long way from home when I shot at it the other day & judging from that experience the species must forage a long way. Another Vaux swift was flying about over the fields. Several shots at it failed & I guess that this is my poor shooting day.

There were several birds left from yesterday's kill so I had a busy day.

In the evening I set 11 rat traps near woodrat nests in the willows near camp.

Apparently these are *Neotoma fusipus* and represent the most southern station for this species. No mouse traps were set.

May 15th 1925

My rat traps held 2 immature rats & 2 *Peromyscus c. insignis* while the steel traps were empty as usual.

Violet-green swallows were common this morning.

I picked up a half dozen redwings and a beautiful ♂ yellow throat.

Saw a pair of ground doves on my way to camp.

In the evening I rebaited the rat traps.

May 16th

My rat traps held 2 adult Neot. and they certainly look like *N. albigula* but the range of this rat, as given by Miller (1923) does not come into Baja Calif.

I started out hunting very early this morning and instead of taking the usual route thru the willow bottom I went up on the bench above. Passing a barley field that had not developed and was heading out at less than six inches in length owing to the lack of water I flushed a pair of Savannah sparrows & secured one of them. Certainly late for them!

Over a hundred ravens flushed from the small 6 or 8 acre field where they had assembled to feed on grain reminding me of a small bunch of crows in the north. I am told by natives that the ravages of this bird amid the corn and other succulent vegetation is tremendous.

The Barn & Cliff swallows with a fair number of Rough-wings were out in force this bright morning & when I came to the high bank overlooking the ~~the~~ willow bottom I could see & hear chats in many places singing & performing their nuptial flights.

During the past few days I have been particularly observant in hopes of finding some of the birds that are one most common species in the willow bottom of South. Calif. such as Black-headed grosbeaks, black-chinned hummers & Bullock Orioles, but not a single one has been seen or heard.

Anthony towhees seem extremely rare in the willows while above they are quite the contrary.

Here also I find Cassin kingbird the only breeding species while Western is the common bird of S.D.Co.

The only hummer here noted so far is Costa and it seems abundant tho not nesting in the willows, but feeding there, occupying the same association as in So.Calif. side hill brush & cactus.

On arriving at my first trap I found a fine male coon so hunting for the day stopped.


I pickEd up both of the traps & ca~~ck~~ed them nearer camp where I had a game trail spotted.

Arriving in camp I found a skunk (mephitis) had been brought in by a Mexican, evidently the beast had been killed by the dog & club method & smelled accordingly.

Thus filled tthe day to the overflowing point but to make it real a Mexican lad came in with 19 live gophers to sell. I pic~~ck~~ed out 5 of the large ones & gave him a quarter and didn't know what time I would get to bed this night. This also was the day I was to meet Mr.Sefton & Mr. Abbott at Santo Domingo - 69 miles north, but such chances!

The rat traps were rebaited my Mrs. C. this evening.

May 17th 1925

The rat traps were picked up before sunrise this morning & held a bobtailed  .

After breakfast I went after the traps ca~~ck~~ed yesterday & when scrutinizing the grass near the tule pond discovered more runways that I am positive were made by Microtus. This seemed heartbreaking for today we simply must leave the place to meet the party at Santo Domingo. However, it strengthened the necessity of returning.

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Mrs. C. had a great accumulation of eggs so I spent part of the morning blowing them. Before I had finished a whole family of Mex. descended upon the camp delaying me terribly.

We finally got started about 4 p.m. arriving at Santo Domingo at 8 p.m., 4 hours enroute. We found Mr. Abbott & Mr. Fleming had been there tho went out hunting coons when we arrived. They returned late.

I set a line of traps with Mr. Abbott's help placing them along the roadside thru the same locality that the type specimens of *D. gravipes* was taken.

May 18th 1925

Was awakened by a terrible clamor in the top of the pepper tree under which Mr. Abbott & Mrs. Fleming & I were sleeping, for at least six kingbirds were squabbling, expressing their feelings as loud as they could. All this at 3 a.m. - a really terrible time to start a family row. As dawn was breaking 2 poorwills were heard near Red Rock Hill. They must have or be nesting there this season.

My traps held 3 *Perognathus* (2 varieties), 2 *Peromyscus m. gambeli* and one each of *D. gravipes* & *D. a. late maxillany*.

Cedar waxwings were still about and both species of kingbirds were seen - hence the early family row!

Whether the Westerns were migrating or preparing to breed I was unable to determine tho a Cassin had a nest well under construction in a nearby pepper tree.

The Pheobe that had its nest under the eave of the adobe home was feeding small young.

We talked over future plans & decided to return to El Rosario ~~Rosario~~ for a few days, Mr. Abbott & Mr. Fleming accompanying.

We left Santo Domingo at 2:20 p.m. southward bound and arrived near the old camp at about 8.

We settled temporarily near the roadside & with Mr. Abbott's help set up a short line of traps thru the dry desert area near the hills.

May 19th 1925

My traps held 3 *Perognathus* & a single *Peromyscus e. fratulus*. A few skins that had been left from yesterday were still to be prepared.



Mr. Fleming was ill this morning & was unable to get about. While I was at work Mr. Abbott took my gun & went hunting getting a wren-tit. About 9 a.m. a Green warbler (*Vermivora*) was seen & heard near camp but we were unable to get a shot at it. Probably the last of the warbler migration.

After the work was completed we prepared to move to a better camp site as water was too far away at this place. In the late afternoon Mr. Abbott & I went out with the traps. We made 5 sets with steel traps and set a short line of mouse traps on the edge of a tule pond for *Microtus*.

May 20th 1925

A Mexican lad came into camp at 5 a.m. just as Abbott & I were about to leave for the traps, and informed us that a mapache was in one of the traps. Of course this hastened the departure and we were soon in possession of a fine ♀ coon. She must have had young somewhere as the mammae were in a lactating condition tho the pelage was in fine shape.

My traps near the tule ponds held a very light catch, a couple of *Reithrodontomys*, several *Peromyscus m. gambeli* & a single *Microtus*. The coon took the greater part of the day to prepare.

Messrs. Abbott & Fleming drove up Aguaita Canyon collecting plants, getting back to camp at sunset.

I reset my steel traps & rebaited the mouse traps this evening and after supper Mr. Abbott & I set a short line of mouse traps on the bench above camp by the light of my gasoline lantern.

May 21st 1925

My steel traps were empty this morning and my mouse traps set near the tule pond contained 3 *Microtus*, 2 Harvest mice, several *Peromyscus m. gambeli* and a shrew. The latter was indeed a fine accession.

The traps set at this bench above camp held a single *Dipodomys* & 4 *Peromyscus m. gambeli*. Evidently the mammalian fauna of the dry hillside does not get on to these brushy benches.

After breakfast Mr. Abbott & I armed ourselves with a small home made dip net, gun & camera and went up the valley a mile or so to a place in the stream where I had seen a lot of small fish. We wanted specimens of these as their identity was unknown to us.

No unusual birds were seen tho the cliff, barn & Violet-green swallows, with an occasional white-throated swift, still were flying about.

A couple of yellow-throats were seen. Our efforts as fishermen resulted in the capture of about 25 fish & the total catch could easily be placed in the palm of my hand. Some of them were very tiny being about  $3/4$  of an inch in length. However, the adults were about  $1\frac{1}{2}$  inch long & had a peculiar spine near the vertical fin.

Two garter snakes & a small frog were collected in the ditch.

Returning to camp Abbott & Fleming & I prepared for a trip to the village & down to the seashore a few miles to the westward. We left Mrs. Canfield to guard the camp. It is necessary here to always have someone on guard as the natives drop in in groups of 2 to a dozen & if no one was in camp I am afraid things would disappear. This has worked a hardship on our hunting activities here as specimens are much more easily procured with 2 people hunting.

Near El Rosario several Horned larks were flushed from the roadside when passing on our planned field trip to the bench land.

Many photos were made of the old Mission bells, town & people.

We drove west of the village a couple of miles & found the road did not go to the sea shore. Here we found a Mexican family who offered us much information regarding the presence of different plants, especially a great row of large palms, as we could understand. After promising them prints they all posed for a picture while Fleming made eyes at a senorita in their midst.

Abbott & Fleming left about 3 p.m. bound north & homeward.

I rebaited my mouse traps near the tule pond & reset my steel traps. The places don't seem very good, however & I shall have to get out and hustle new places to set them. Mice seem to be bothering things about the camp & last night Mr. Abbott had one seen over the top of his bed as he was sleeping, waking him up, so I set 3 or four traps near my collecting chest.

May 22nd 1925

My traps held 7 *Microtus*, 2 Harvest mice, 3 *Peromyscus m. gambeli* & another shrew. Great luck on the latter. I left the traps out again, resetting some of them without bait.

All the skins taken so far have been trapped at the very edge of the water and apparently all accidental.

The traps set in camp held 1 *Peromyscus m. gambeli* & 3 *Peromyscus i. insignis*. The presence of this mouse as noted farther back in my journal is quite a puzzle & it at least is an extension of its known range. I had a few skins left unprepared from yesterday, as the presence of visitors with the extra activities above my usual routine, took time that could not be made up, for my hours are always filled to the limit by my daily duties.

I went out about 4:30 this afternoon to reset my steel traps and when passing thru the garden saw about 50 white-crowned sparrows. I tried to find good locations down the river but only succeeded in getting two sets made & then was pressed for time to get my mouse traps rebaited before dark. A steel trap set near an old Mex. garden had been disturbed during the day, probably by his dog as the set was torn apart & blood was all over the trap. He was not about so could not find whether this was so or not. I rebaited & reset the trap in the same place again.

During the day two more *Microtus* & half a dozen Say Sparrows had been killed in the mouse traps.

Returning to camp after sunset a Barn Owl flew past near enough for proper identification.

A few traps were again set in camp this evening.

May 23rd 1925

The traps near the tule pond held a poor catch, 1 *Microtus*, a couple of Harvest mice & three or four *Peromyscus m. gambeli*, while the steel traps were empty.

I picked up all the mouse traps this morning & shall reset them in a new locality this evening.

I shot a few birds, including an Arizona hooded Oriole & another White-crowned sparrow. Only saw 2 of the latter this morning; they certainly did not tarry long. Another migrant noted this morning was a small flock of 8 Cedar Waxwings that alighted in the brush near camp. A lucky shot brought down two.

In the late afternoon I took what meat we had from the skinning boards with the two unset steel traps & went out to research for new places where I might catch a coon.

I covered the river bottom as far down as El Rosario but found no suitable places so the bait was piled on the two sets made yesterday in hopes of coaxing some prowling beast into them. Part of the mice traps were set near the edge of a tule pond south of camp in the largest *Microtus* colony yet discovered & the rest of them were placed up in a desert wash where I might secure some more *Perognathus*.

During the day the 4 species of swallows were seen about camp, Violet-green, Barn, Cliff & rough-winged in the company of a singing ♂ Martin.

May 24th 1925

My mouse traps in the desert wash held 3 *Dipodomys*, the tail of a *Perognathus* (large one) and 1 each of *Perognathus m. gambeli* & *Peromyscus e. fraternalus*.

The *Microtus* traps held 2 Harvest mice, 3 *P.m. gambeli* & 4 shrews. Great luck. The peculiar feature was the entire absence of sign. This I believe to be caused by them being trap shy.

My steel traps held a fine ♂ bob cat, but to my surprise did not look anything like the skin I bought from a native. More like the San Diegan animals. Don't know just what to make of this situation - maybe two species here.

I set two more steel traps this evening, rebaited the mouse traps which during the day had captured 2 *Microtus* & set a short line of traps in the desert wash.

Long after dark 3 Mexican horsemen came galloping into camp in a jubilant manner asking me if I "gusto sorrio" affirming their question they produced a very odiferous skunk on the end of a rope.

They received three dollars & thought they had played a great joke on me. In fact it was in a rather potent condition but was a fine adult ♂ & I was glad to get it.

May 25th 1925

My desert traps held 3 *Dipodomys*, while the traps near the tules held 1 shrew, 2 *Microtus*, 4 *Peromyscus m. sonoriensis* & a *Peromyscus c. insignis*. A half dozen mouse traps set in camp held an adult *P.c. insignis*.

One of the steel traps held a ♀ coyote to my disgust, but I saved it regardless of the millions of fleas that it harbored.

As we were eating breakfast a Mexican brought me a fine ♂ wildcat. This made a real day for me for it had been planned to move up to Santo Domingo where preparations were to be made for the mountain trip. Upon examining the beast I found it to be very different from one trapped yesterday.

I had picked up all my mice traps this morning so when evening came I had them to set out again, they were placed along the edge of the stream in the tule patch.

I did not get my skins completed until after 9 o'clock this evening.

May 26th 1925

My traps held 5 *Peromyscus m. gambeli*, 4 *Microtus* & 2 *Reithrodontomys*, while the 2 steel traps were empty.

I had this region pretty well worked out so we broke camp & left about noon bound north for Santo Domingo.

Several Means thrashers & Bryants cactus wrens were seen enroute and many pairs of Cassins kingbirds were seen in the three groves of trees near San Quintin. Apparently the Western does not nest in this region.

Santo Domingo was reached at sundown & I set out my traps thru the cactus covered area east of Miss Hamilton's ranch.

May 27th

The quarreling of the kingbird families awakened me at an extremely early hour this morning and I watched them some time before arising. There seem to be 5 or 6 pairs, all trying to build nests in neighboring trees & each not appreciating company, of course from an individual kingbird's standpoint, this situation would lead to trouble, as with such a state of overpopulation, fly catching would be difficult. On my last visit to this ranch there were a few belated migrating Westerns about the trees and they were causing more trouble than three wild cats in the same sack, as scarcely a half hour passed during the time between the very break of day & twilight that a big fight was not in progress & how they did like it, for it was not an uncommon occurrence to see 3 or four flying in mid air dashing & darting at one another, yelling at the top of their voices. However, with the passing of the Western things were a bit more quiet in "Kingbird ville" .

My traps held a light catch of 3 *Peroganthus*, 4 *Peromyscus*

a. fruticulosus, several *Peromyscus m. gambeli* and one each of *D. gravipes* & *D. a. latimaxillaris*. The Cedar waxwings were still about the fruit in small numbers.

I set my traps this evening thru the rose covered north slope on the long hill south of the ranch and part of the line extended to the floor of the small valley. *Dipodomys* sign was abundant here, tho it was only that of *D. a. latimaxillaris*.

wood rat nests were in about every cactus and I set the three flat rat traps that I had in my trap sack. As I was setting the traps many Texan night hawks were seen flying about.

May 28th 1925

Several Brush rabbits were seen near the fields as I left the ranch this morning to get in the traps & I shot a couple.

The traps held 7 *D. a. latimaxillaris* and a couple of *Perognathus* in the valley floor line, while the rose, cactus covered slope line held 4 *Perognathus*, 5 *Peromyscus e. fruticulosus* and a couple of *Peromyscus m. gambeli*.

One of my wood rat traps was missing & the other two each held a *Neotoma i. intermedia*. This cover of wild roses & cactus makes an exceptionally fine protection for this species & they are as abundant as the food supply will permit. Their trails were everywhere and all seemed well traveled, for no enemy except an occasional snake can venture into this thorny growth.

I shot a Mearns' thrasher in the cactus this morning & was surprised at the bird allowing me three shots with the 12 gauge before I killed it. They are usually so wild that it is almost impossible, unless by accident, to get within 100 yards. a lone Pileolated warbler was about the pepper trees all day today.

I set my traps a mile south of San Ramon this evening thru a peculiar brush that has such usually small thorny burrs. *Dipodomys* sign was nil but I wanted to try this association as this problem seems to offer some solution to the distribution of *D. gravipes*.

Bats were flying in fair numbers about the ranch this evening but my poor marksmanship I failed to kill a single specimen. *by*

May 29th 1925

My traps held 7 *Perognathus*, 4 *Peromyscus e. fruticulus*, 5 *P. m. gambeli*, 3 *Dipodomys m. paven*s & one each of *D. gravipus* & *D. a. latimaxillaris*. Jack rabbits were very common along the road as I drove to the traps this morning. Two live bird traps were placed in the brush near camp as I wandered to catch a series of *Amospermophilus l. peninsularis*.

Violet-green swallows & Cedar birds were still about the place today. Traps were set thru a spiny brush with thick juicy leaves 1 mile south of San Ramon a half mile farther west than where I had the last night. This was a new association and lack of sign left a doubt in my mind as to the success of the venture. Several Horned larks *O. a. achias* were flushed from the roadside near San Ramon this evening. I shot two bats after returning from the traps after sunset. Both were *Eptesicus fuscus*.

May 30th

My traps held 2 *Dipodomys m. paven*s, 1 *D. a. latimaxillaris*, 7 *Peromyscus e. fruticulus*, 6 *P/m/ gambeli* & 5 *Perognathus*. The failure to secure a *D. gravipus* was at the least disappointing for even the live traps at camp had been robbed of the bait without a capture.

Violet-green swallows, Cedar birds & a single Wood pewee were the only migrants about this morning.

This evening the traps were set on the north end of San Quintin Plains at a point near the road where the level of the expanse is first reached after descending the low chain of hills that separates the plain from the Santo Domingo river valley.

Small mammal sign was abundant and in the more sandy areas I found tracks & tail marks of the small *Perognathus helleri*.

The association in this region was low chaparral. The greater portion of which was "squirrel nut". Very little cactus existed, tho an occasional clump of cholla was found, while the wild rose was not found at all on this alluvial soil.

I set my shylers at the entrances of *D. gravipes* burrows near camp.

May 31st

My traps on the plain held an abundant catch, 11 *Dipodomys m. pavus*, 6 *Peromyscus m. gambeli*, 1 *Perognathus*

1 *Onychomys t. macrotus* & 3 *Perognathus hilleri*. My rat traps held a single *D. gravipus*.

A violent wind storm started about 10 this morning and blew violently all day sending gusts of sand swirling into the air. This prevented trap setting this evening as it would be impossible to keep bait on the traps.

June 1st 1925

I was awakened very early this morning, in fact the first grey streaks of dawn in the east had not shown up, by the hooting of two Horned owls in the eucalyptus trees about 50 feet from my bed.

Fortunately my gun was handy so I slipped out of bed, loading the magazine with two shells taken at random from my trouser pockets as quietly as possible. Getting my eyes as well focused as possible on the tree I began scrutinizing each cluster of leaves silhouetted against the midnight sky. Finally I made out what I believed to be the shape of an owl. Took as careful aim as was possible & blazed away. A flopping in the branches followed but no thud was heard from the ground so I thought that I had missed my mark. However, I looked carefully under the tree without results and returned to bed. With daylight and the return of activities about the camp brought results but in a surprising manner, for as I was leaving camp to inspect my rat traps I was recalled in an excited tone by Mrs. Canfield, for she had spied an owl perched on the top of a gasoline barrel back of the garage. An aux shell secured the specimen which upon being skinned was found to be filled with no. 10 shot. Evidently in the dark I had reached the wrong kind of shell from my pockets and my aim had been true. Upon dissecting the stomach was found to contain the tail & both hind feet of a *D. gravipus*, a green caterpillar 1 inch long, a grass-hopper & three small brown beetles. The identity of the pocket rat was positive for the feet were intact & were measured & found to be 45 mm, the exact length of that species. Later I found another pellet under the tree where the owl had perched during the night and tearing it to pieces I found two lower jaws & portions of the skull & vertebrae of a *gravipus*. Evidently this was a part of the same rat and was the last portion to be swallowed & the first to be regurgitated.

My rat traps held another large pocket rat this morning.

The wind again blew violently all day long making camp life miserable.



Bats were flying in and about the buildings during the late dusk & I shot 3 <sup>(Eptesicus)</sup> fuscus & a Myotis .

June 2nd 1925

My rat traps held 2 *D. gravipus* and I shot a nice bush rabbit near the wheat fields.

The wind again raged during the greater part of the day but subsided towards sundown enough to permit the setting of the traps again. They were placed thru the same locality as on May 31st, in the northern end of San Quintin Plain, tho all were put in sandy soil for small *Perognathus*.

Violet-green swallows & Cedar birds are still about the ranch & I am beginning to think that they are like the greater porportions of the quail in this vicinity, not breeding this season on account of the drought.

Bats were abundant this morning but my poor marksmanship brought down but a single *Epticus*. Upon skinning this animal I found her in a pregnant condition. The single fetus being of large size. This species has colonizing habits & they no doubt have taken up their roosting place in one of the buildings nearby. So far all of the *Epticus* taken have been females and gave to substantiate the fact that as soon as the breeding season is gone the males do not seek the sompany of the females any longer but move to other feeding grounds & possible other colonies of females. Whether these animals are polygamus is as yet not known but their absence as above noted would indicate the theory had some foundation.

June 3rd 1925

My rat traps at camp held a single *D. gravipus* and the traps on the plain held 7 *Perognathus helleri*, 9 *Dipodomys m. parvus*, 1 *Dipodomys a. latimaxillaris*, 1 *Onychomys t. macrotus*, 1 *Perognathus* & 6 *Peromyscus m. gambeli*.

The sky was heavily overcast all day but seemed to break at nightfall. I strung out the traps on the north side of Santo Domingo river valley this evening, over a mesa covered with low chaparral, mostly "thorny brush & squirrel nut".

I shot bats again this evening, getting 3 *Eptesicus* & one *Myotis*. The latter seemed to be a very interesting animal and I was unable to name it, never having seen one just like it before.

A man arrived late this afternoon from San Diego & said there had been a sharp rain in the north.

June 4th 1925

I was awakened before daylight this morning by rain but as it was only falling lightly I did not do more than cover up a few things about camp.

The traps contained 1 *Onychomys t. macrotis*, 2 *Perognathus helleri*, 4 *Peromyscus m. gambeli*, 5 *Perognathus*, 1 *Peromyscus e. fraterculus* & 9 *Dipodomys m. parvus*.

When setting the traps last evening I had hopes of getting *D. gravipus* in this place but they are evidently rarer than I had supposed. Their habits reminded me very much of the form *D. ingens* found in the McKettering district in the southwestern end of the San Joaquin Valley. Both species seemed to live in small isolated colonies with definite trails leading from one burrow to another. The burrows of *ingens* were always left open while *D. gravipus* closes theirs part of the time.

Neither species seems to do much digging or planting and probably forage leaves much more than *D. agilis* or *D. merriami*. This may also account for the difficulty in trapping these species for they seem to be caught more by accident than by attraction to the bait.

My series of *ingens* was taken by using small steel traps & placing them right in the mouths of the burrows as I am now placing the rat traps.

*D. deserti* seems to wander about, some times considerable distances from their burrows and seem to lack the trail habit, that both *ingens* & *gravipes* have.

The rain clouds were blown away by a terrific wind which prevented trapping this evening. A Barn owl flew into the pepper trees over camp after dark this evening and the poorwills were again heard.

June 5th

The violet-green swallows & Cedar birds are still hanging around and several white-throated swifts were swooping about in the strong wind.

In the late afternoon Mrs. C. & I drove down to the marshes at the mouth of Santo Domingo river near the ocean.

A very large area directly behind the small beach is covered with a fresh water marsh and large tule patches were growing. A good stream of fresh water flowed thru the tules and such plants as poison oak were growing in close proximity to the sand dunes of the beach. San Diego Red-winged blackbirds, Yellow-throats & Song sparrows (S.D.) were abundant and on an open stretch of ground nearby many

many Calif. Horned Larks were seen. A lone marsh hawk was seen coursing to & fro over the meadows.

I set about 20 traps thru the marsh grass near the water while busily engaged Mrs. C. heard the clacking of rails from the tule marsh. Maybe lightfotted & I certainly would like to secure one or two of this number.

On the way back to camp many Texan Nighthawks were seen flying in the twilight.

June 6th 1925

An early start after a very early breakfast brought us to the marsh about 6:30 this morning and I found but a single harvest mouse & the tail of another. The greatest surprise, however, was the capture of a Farallon Rail in one of the traps. The capture of this specimen not only gave us a great thrill but added rather an extensive length of coast line to their known breeding ground as the bird proved upon dissection to be an adult male in breeding condition.

We then went over onto the sea beach, which was but a hundred yards away and much of interest was found. Skunk & coon tracks were all about, from the waters edge into the soft sand, where identity was impossible, thus showing that both species were not uncommon here.

Farther up the beach great flocks of sea birds were seen & upon closer approach their numbers seemed to increase for the sand was simply swarming for nearly a quarter of a mile. Farallon Cormorants, Western Gulls, Calif. Brown Pelicans & Glaucous-winged Gulls were there, their abundance being in the order here given. The cormorants far outnumbered the rest and there seemed to be thousands in the superlative degree while of the Glaucous-winged Gulls there were but six.

An examination of the geography of the region explained the reason for such a congregation as the surf had dammed up the mouth of the Santo Domingo River and the small flow of fresh water had formed two fair-sized lagoons, in which these birds reveled. 15 coots were seen swimming on the pond & 3 ducks flashed at a long distance from me & I was unable to determine their identity.

I pondered about a tule swamp flushing an Anthony green Heron which I shot down with my aux, but was unable to retrieve it as it fell into a dense tule patch.

The only shore birds seen were two Western Willets near the beach line, tho tracks of small waders were everywhere

in the soft mud around the lagoon. Cliff Swallows were abundant flying over the marshes & a few Violet-greens and a single Barn Swallow were noted. Several Western Martins were about, the males singing their cheery song at frequent intervals while several White-throated Swifts darted about.

As we were returning to the Ford I saw a small black object dart across the narrow opening in the tules & sat down to wait for its return feeling certain that I had seen another Black Rail.

Mrs. C. followed my example a hundred yards farther on. She soon fired at a small black object and when I arrived on the scene & was removing my shoes for the wade she called me, saying that a large rail was visible. I soon spied the bird & fired. The gun was hardly opened to extract the spent shell when Mrs. C. saw another large rail near the place where the other had been. Reloading quickly, we both fired. Arriving at the place I found 2 adult Virginia Rails & a tiny young one. The capture of these birds extends the breeding range over 250 miles southward of the known range. The capture of the Farallon Rail in the mouse traps was such an unusual take that the traps were left put and more are to be set this evening.

Returning to the trap line about 5 p.m. 5 Harris Hawks were seen near San Ramon & one was secured. There appeared to be 2 adults & 3 young.

During the day the mouse traps had not been disturbed and I set all the rest of my bunch thru the tules on the beach side of the marsh. While setting them I noticed gopher mounds. Oddly enough these diggings were within 100 feet of the ocean.

Arriving at camp after dark Mrs. C. shot a poor will under the pepper tree.

June 7th 1925

I took my camera to the beach this morning & spent a couple of hours photographing the long lines of cormorants as they flew past.

My traps held but 4 Harvest mice one of which had been caught in one of Borrels' traps as its tail was bobbed.

When at the lagoons I saw a few new birds to add to the list when 6 Greater Yellow legs, 1 Marbled Godwit & a Long-billed Dowitcher flashed from the sedge grass. I took a long shot at a lone Belding Sparrow on the beach.

A Tanager kept singing in the trees about camp & had been since late yesterday afternoon. I stalked and stalked the singing bird but was never able to get my eyes on it as it flew away. The reason this was obvious a year old bird and not yet in the bright red plumage. I later shot a ♀ Arizona Hooded Oriole by mistake & frightened the Tanager away.

We had hardly arrived in camp & commenced the daily toil when Dr. Hanna & Prof. Gallegos came in. This put an end to the work & the rest of the day was spent visiting. We accompanied them to San Quintin where the power launch from the "Ortolan" awaited them.

I set a bunch of gopher traps about the ranch this evening.

June 8th 1925

During the night 3 gophers had been captured & I reset the traps. During the day 5 more were caught.

Commenced preparing for the move to San Quintin tomorrow.

Cedar birds still about.

June 9th

There were so many details to be cared for that we could not get away for San Quintin today

June 10th

We left Santo Domingo about 1 p.m. bound for Agua Chicita Canyon where camp is to be established and a collection made of the small mammals from the vicinity of San Quintin.

Camp was established in an old deserted shack at the mouth of the canyon. Several old pepper trees were the only trees to be seen and a pair of Cassins Kingbirds had their nest in one. Calif. Horned Larks were common about the plowed fields and a headless ♂ martin was found in the old house where it had evidently sought shelter on the rafters & died during the night.

Owl droppings and lots of regurgitated pellets were all about the building & old water tower. Examination of some of the pellets disclosed the fact that *Dipodomys* were their chief food & some skulls of *D. gravipus* were found indicating their presence here.

A survey of the yard proved this to be correct for numbers of their occupied burrows were discovered. It seems strange how this species prefers the cleared hard ground of a deserted field to the brushy land on the soft plowed fields. A road led from camp straight into San Quintin, 4 miles west & south.

The nearly level plain held three distinct botanical belts paralleling the general line of the coast. Growing in these kinds of soil. This fact has a great influence on the mammalian occupation, some species being found most abundant in sandy soil and others in hard soil. This same condition obtains in the vegetation and whether its the soil or the vegetation that controls the range of the small mammals I am unable to say.

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As I left camp to set the traps a large flock of Valley Quail were seen. The traps were set thru the sandy area about half a mile east of San Quintin. This is type locality for 3 mammals & one of them *Perognathus helleri* should be abundant in this sandy stretch.

Returning, a Brush Rabbit was shot near the trap line.

At camp after sunset the call of a Burrowing Owl was heard.

June 11 th 1925

My traps held 4 *Onychomys t. macrotus*, 5 *Dipodomys a. latimamaxillaris*, 3 *Dipodomys m. parvus* and 3 *Perognathus helleri*.

Near camp a lone Ash-throated Flycatcher was seen.

The mouse traps were set in the same vicinity as last night, near San Quintin. A brisk cold fog-laden breeze was blowing out of the north-west that chilled the very marrow in the bones & gave promise of an exceptionally poor night for the traps.

After dinner I set my schylers by the light of the gas lantern. The traps were placed at the entrances of the burrows of *Dipodomys gravipus* about the yard. While searching for occupied burrows I suddenly saw the hopping form of a large Kangaroo Rat, apparently blinded by the strong light. Dropping the traps I made after the animal always keeping the lantern in front of me & towards the rat. After a couple of minutes of rapid scampering in a very zig-zagging course I caught the rat & found my captive to be a fine *Dipo. gravipus*.

June 12th 1925

My traps near San Quintin held 9 *Dipodomys latimaxillaris*, 2 *Onychomys t. macrotus* and one each of *Reithrodontomys m. peninsulae*, & *Perognathus helleri*. The latter was destroyed by ants.

My schylers held 3 fine large specimens of *D. gravipus*.

About 10 a.m. I set the two line traps near the brush close to camp, in fact close enough so they could be watched with the binoculars & in the next 2 hours 2 *Ammospermophilus* were taken & as this made a full day's work I did not reset them.

On the way to set the traps a fine large wild cat was seen at close range. Stopping the Ford we both jumped out with our guns but the cat was never seen again. How it

outwitted us I was unable to determine for the brush was not very thick nor high where the animal disappeared.

The traps were set again in the near vicinity of San Quintin. When returning to the machine I killed a medium-sized rattle snake as it lay coiled in the trail.

June 13th 1925

My traps held 5 *Perognathus helleri*, 9 *Dipodomys a. latimaxillaris* and one each of *Onychomys t. macrotus* & *Peromyscus m. gambeli*.

The schuylers near camp were empty tho 1 was missing & had probably held a victim & been carried off by a prowling coyote and could not be found.

During the day 8 Antelope Chipmunks were captured. The traps were again set for *Perognathus helleri* near San Quintin this evening tho not over the same ground. It is seldom if ever that the exact same ground is used and this exception is only in the case of a very unusual catch of some better known animal.

The schuylers were again set near camp & the two bird traps were located near some *Dipo.* burrows. These traps are exceptionally fine for small mammals when a floor is fastened on them & I have had the greatest luck catching these large *Dipodomys* in them.

After finishing a few last details of the day's labor & writing the daily notes I went out with the lantern to look the traps over. This at 10 p.m.. As I stepped out of the door of the shack I saw a *Dipo* hopping in the range of the light, blinded by it. After a lively chase of 50 yards I caught the animal.

Upon examining the line traps I found one had been shoved about 50 feet from the place I had set it but could find no evidence in the shape of tracks that would identify the marauder.

June 14th 1925

My mouse traps were indeed a sore disappointment this morning, 2 *Perognathus helleri*, 3 *Dipo.* a *latimaxillaris* & 1 *Dipo. m. parvus*, the latter eaten up by ants.

The schuylers, however, had a good catch as five nice animals were in them.

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The Ash-throated Flycatcher<sup>1</sup> was about again today and a couple of Barn Swallows & four Cliff Swallows were seen flying about nearby.

A Least Vireo that has sung from a thicket of laurel-leaved sumac nearby seems to be the greatest surprise in bird-dom, for it is a species that would be least expected to make its summer home in a sumac growing in a dry canyon.

The traps were set in the same general locality this evening tho not thru the sand for Perognathus, but in the flat lower ground that was covered with fairly high dense brush. Here it was hoped that Reithrodontomys might be found, for this is the type locality of R. m. peninsulae.

The schuylers set again as usual this evening.

June 15th 1925

The schuylers held 6 Dipodomys gravipus in spite of the fact that one more of the traps was missing. Certainly there must be a prowling fox picking up these traps!

The mouse traps held a small & disappointing catch for not a single harvest mouse was taken. However, there were two large Perognathus, one Perognathus helleri,<sup>4</sup> Peromyscus m. gambeli and 3 Dipodomys a. latimaxillaris. My dwindling sack of mouse traps was reduced by two this morning leaving me with 42 out of 75, my number when starting on the trip. Besides the occasional wandering varmint that picks up a trap with a mouse in it when ever they run across them, this region abounds in ravens and they have proven to be the worst pest I have ever had to contend with, for even the small tagmarker tied on the bush excites their curiosity and they circle about over it seizing it up with close scrutiny.

I set out three bread-baited schuylers for chipmunks and caught but a single one during the day. Late in the afternoon I walked to the north side of Agua Chicit Canyon to have a look at the region. Crossing the field north of camp I was amazed to find such numbers of Dipodomys gravipus burrows, A thousand individuals to 10 acres would seem conservative as an estimate. Indeed this man who farms this place must have his problems to combat with such forces for between the jack rabbits & the Kangaroo Rats it would seem almost impossible to get the grain ~~spr~~sprouted.

Arriving at the canyon side I found a veritable forest of cactus of many species growing in each gully wherever on the slope soil conditions permitted.



This place was a paradise for wood rats, cactus wrens & Mearns Thrashers and in the hour spent I saw a pair each of the birds & innumerable rat nests.

I did not get a shot at one of the four birds and in all my experience I have never had such shy wary birds to cope with. In the San Diego region and such desert localities as I have collected in the cactus wrens seem prone to leave the big cactus thickets and if the specimens are definitely sought a wait of a few minutes brings results. Here, this species of cactus wren starts going at the first intimation of approach and keep running & flying till lost in the distance.

The thrashers do likewise and with such marvelous protection as this cactus offers, it is beyond my comprehension why they should be so shy, surely no natural enemy would cause such flight.

Several piles of fresh deer feces indicated their presence in this vicinity and examination of a very dense cactus thicket revealed the roosting place of a large band of quail, for fecal matter 2 inches deep in places was found and they are indeed well protected during their slumber with such a barrier of thorns!

As I was returning to camp the rattle of a small woodpecker drilling in a dry yucca stem was heard & several Bell's sparrows were seen thru the brush. A great pile of Barn owl feathers was found in the brush where some varmint had disposed of the owl. Whether it had been captured or found dead was a mystifying problem that can never be solved!

The mouse traps were set on a cactus covered hillside near camp this morning.

June 16th 1925

My traps held an abundant catch but all except one specimen were of the wrong species. Three *Peromyscus m. gambeli*, eleven *Peromyscus e. fraterculus*, one *Perognathus* & three *Dipodomys m. parvus*.

The presence of the latter species amid the rocky cactus covered side hill association was surprising. The *Ammospermophilus* about camp had become very tame so I selected a good-sized rock, placed some barley about & on top of it set up my camera. Mrs. Canfield secreted herself amid the brush nearby and pulled the thread. All morning long she manipulated the camera & made fine exposures. After lunch

I took a turn at it & made 3 more exposures. About four p.m. as I was taking in the outfit, as the light was failing, Chester Lamb and Audrey Borell of the University of Calif. Museum of Vert. Zoology drove in, They have spent the past three months doing a sectional strip over the Sierra San Pedro Martir & are thru for the summer. A very pleasant evening followed telling our different collecting experiences.

I set my traps thru the low thorny brush south of camp this evening.

June 17th 1925

My traps held 5 *Perognathus*, 4 *Dipodomys m. parvus*, 5 *Peromyscus m. gambeli* & 9 *Peromyscus e. fruticulus*. A single *Schuyler* that had been set for chipmunks & not brought in last night, held a *finde D. gravipus*. The latter & the *D.m. parvus* were given to Borell as he had not secured either species during his three months. The Berkeley boys pulled out after breakfast going back to San Telmo via San Quintin. We made arrangements to meet them at San Antonio del Mar tomorrow so we also packed & left about 10:30.

At Santo Domingo the small flock of Cedar birds were still about to our surprise & one was taken to mark the tardy record.

June 18th

Up very early this morning as we were to meet Lamb & Borell at San Antonio del Mar at 10:30.

I looked into 2 km crossing Kingbird's nests about the Hamilton ranch this morning & found 3 eggs in each. Evidently the birds had spent so much time fighting that they found no time to lay.

A small band of waxwings were still flying about the premises and as the two Fords crossed Santo Domingo Riverbed, now dry, a lone *Pahinoepepla* was seen flying overhead.

The trip to San Antonio del Mar was made in 2 hours & 15 minutes where we found the University boys awaiting us. They were only 10 minutes ahead of our arrival. The trip to Santo Tomas was uneventful and the only bird worthy of record was a pair of Western Lark Sparrows seen in a grove of large sycamores 6 miles north of San Vicente. Here, Bullock orioles were also heard. It seems that the range of this species is in common with that of the sycamores

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and I am firm in believing that the ranges of many species is thus dependent on certain tree or plant ranges.

We arrived at Santo Tomas about 5 p.m. and made camp by driving the three Fords in such a position that a sheltered room was within then stretched my large canvas over for a sun shade.

Borell & I set out gopher traps in a yinyard near the old mission palms. A small group of springs have been diverted into an irrigation ditch & several well kept verdant farms are along its banks. Gophers seemed abundant and when asking permission to trap in the vinyard an elderly Mexican gave us a very graphic account of the method of catching these animals alive. Neither of us could understand his words in his exitement but his gestrulations were so well given that lisunderstanding them was impossible.

All my moyse traps were set thru a sandy, sparcely brushy river bottom, where much *Dipodomys* sign was in evidence.

June 19th 1925

The mouse traps held 19 *Dipodomys a. simulans*, 2 *Onychomys t. ramara* & 2 *Peromyscus m. gambeli*.

One *Dipodomys* and 1 *Onychomys* were given to Borell.

My gopher traps held 2 fine adult specimens. The traps were reset & during the day 5 more specimens were taken.

When wandering thru the brush hunting Mr. Borell found a very small gopher snake starngling a lizard and called me over to witness the struggle. It proved so interesting that I dashed back to camp for my camera, this at 6:30 a.m. Setting up the instrument a series of photos were made thru the whole operation. The complete lizard was swallowed at 8:04. The snake was about 15 inches in length & the lizard was about 7.

The mouse traps were set again late this evening thru the same association as that used last night.

When setting my gopher traps in the late dusk a Horned Owl flew very close to me alighting on a fence post nearby. Unfortunately I carried no gun & could not collect him.

June 20th 1925

We left Santo Tomas at 9:20 this morning bound for San Diego.

Ensenada was reached about noon and after lunch & visiting the Goldbower Museum we left at 1:40 p.m. arriving at the international Boundary at sunset where we crossed without trouble.

On the north side of Descanso Bay an Osprey was seen perched on top of an Auto Club sign post by the road side. The bird was so tame that I ran up within 20 feet of it before it took wing.

June 26th 1925

In the company of W.S. Wright, curator of Insects of the Natural History Museum, I left San Diego about 11 a.m. bound for the canyon in which the La Grulla Gun Club grounds are situated, below Ensenada, where there a few days were to be spend collecting insects and checking up the population of breeding birds. The main objective of the trip was to detrmine whether Black-chinned Humming birds, Western House Wrens, Black-headed Grosbeaks, Blue Grosbeaks and a few toher species not found at El Rosario were breeding there.

Our passage at the International Boundary was not made as easily this time as in the past for we were unfortunate in arriving at the Mexican Customs a few minutes after 12 noon and found no presence of sufficient official stabding to permit our passage. This cause a two hour delay but on the arrival of th agent, he took but a single galnce at the permit & said "scientifico" to the host of unoccupied clerks who were cocked on the two back legs of their chairs with heads against the walls for balance dreamily taking in every word uttered. Imagine such a wolf pack going thru your load of collecting equipment!

Proceeding, the journey was without incident until we chanced to stop on the east side of Descanso Bay at a point near the "Haldway house".

Here Mr. Wright discivered a bush ladened with a horde of Lady bugs & his collecting work commenced.

Nearby in a large thicket of wild tobacco I saw many Anna hummers & a single Allen feeding from the long trumpet shaped flowers.

The next incident of the afternoon was the sudden clap of thunder & the ensuing rain which fell very lightly for a minute. We were in the very edge of the storm, but farther along it must have been short but snappy for the road surface was completely dampened.

On the summit of the first large mountain I found a man & woman in trouble, their car broken down. We waited half an hour for them to determine the exact nature of their trouble, so the proper repairs could be sent out.

We arrived at the little "Garito" 3 miles out of Ensenada about sundown & found a very pleasant person in charge. I spoke with him in Spanish, for he seemed unable or undisposed to talk English and received some valuable information for he told of the presence of a cochenial bug inhabiting the cactus patch near Ensenada. This, Mr. Wright said, was worth investigating.

After having driven to Ensenada we drove on to the campus after dark & pitched camp under a large line of oak trees.

June 27th 1925

During the night I heard the calling of a pair of screech Owls in the trees nearby & coyotes awakened Mr. Wright. After breakfast we each struck out in our own pursuits.

I searched out a place in the river bottom where willows were abundant, growing near a small running brook. Apparently ideal for Humming birds. However, an hour's search revealed no trace of Black-chinnes and only 1 hummer was seen and that was a ♂ Costa.

Long-tailed Chats, Least Vireos, San Diego Sparrows, Yellow-throats, Black Phoebes & Bush-tits were seen thru the willows, while in the oaks nearby I found Phainopeplas, Ash-throated Flycatchers, Mourning doves, Lark sparrows, Western & Cassins Kingbirds.

Incidentally, the latter two species in our case were nesting in the same oak. what times they must have had building their nests! - for now with the urgent pressure of finding food for hungry young, of which each pair had three, they would, after feeding the babies take a roundabout course that would bring them within shouting range at least. And, if the opportunity were to be had, a dart was taken in the direction of the opponent, if he could be caught unawares. I'll bet their offsprings have garrulous dispositions, raised in such environment!

While watching an Ash-throated Flycatcher, in hopes it would reveal the location of its nest, I chanced to see a ♂ Phainopepla gathering nesting material for he seemed to be as interested and adept at nest construction as the ♀, who, to my surprise, seemed well satisfied with his help. Some ♂ birds of other species, Linnets for instance, are very industrious about the nest construction but are severely censured & even threatened by the ♀'s for their interference. I have seen ♀ linnets tear out all material carried in by the males, scolding violently all the times. However, the ♂'s sing merrily on replacing the destroyed material having his way in spite of all that had been said, their unbounded happiness was untrammelled by such small feminine notions!

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The Phainopeplas' nests are constructed mainly of plant fibre & very small twigs and it was with no little interest that I scrutinized this male as he searched for material within 10 feet of me. He would get to the tip of a dried sage bush and pull carefully for a twig, failing on the twig question he tried the branch. This was usually loose & a tiny part was secured.

A lone Traill Flycatcher was shot from an oak near the river bottom and a couple of willow Goldfinches were seen nearby.

My search thru the oaks did not reveal W. House Wrens & I doubt their presence here as nesting birds, tho I am certain that they do nest higher up on the base of the Sierra San Pedro Martir for in 1923 I took young during June. Two occupied nests of Phainopeplas were found, one contained 2 pipped eggs & a newly hatched young one, that was as black as his daddy in spite of the fact that it had not the least suggestion of hair or feathers and the other nest contained 3 eggs. Both nests were on the ends of slender horizontal live oak limbs & beyond my long arm's reach.

In mid-afternoon I chanced to look skyward & saw a condor flying very high above the mountain to the north west, putting glasses on it made positive the identification & then pointed it out to Mr. Wright.

In the evening I set about 40 mouse traps near the edge of the water of a small pond. Turtles and several species of toads & frogs were seen while setting the traps. Microtus sign was evident and many of my traps were placed in their runways. Returning I glanced at several of the traps as I passed and found an adult Microtus in one.

June 28th 1925

My traps were disappointing to say the least for they held but a single Microtus. Returning to camp I shot a Arizona Hooded Oriole.

After getting up the two skins we packed up & left going down canyon towards Ensenada.

We stopped when near the mouth for I thought we had the opposite lowest manzanita that Dr. Swingle had spoken of at least specimens were taken.

3 ♂ Blackheaded Grosbeaks were seen in an Elderbush and I shot one of them. Examination proved the bird to be nesting as the belly was dry & free of feathers and the bird acted in a very broody manner.

Farther along, where a fair-sized stream ran thru a good stand of willow & other water-loving shrubs we stopped for an hour's collecting. An adult male Willow Goldfinch was taken and several more were seen. Examining this bird proved it to be nesting also.

A careful search was made for Black-chinned Hummers but not a single one was seen, nor did I find an old nest tho every likely place was carefully scrutinized.

A sharp watch was kept for Calif. Cuckoos or Russet-backed Thrashers but not a single bird was seen or heard.

Long-tailed Chats, Black Phoebes, San Diego Song Sparrows, Morning Doves, least Vireos & Yellow Throats were fairly common and a single male Nuttalls Woodpecker was flushed when I passed.

Driving on we found kingbirds to be abundant on the tree line, noth species being represented. No doubt their nests could have been located in the taller trees along the dry stream course.

It was our plan to explore the region about Punta Banta today so we drove out thru a fairly good road.

The place proved most unliekly from a naturalist's standpoint and we did not stay long.

We visited the hot springs & found them rather interesting. The water was rather salty and too hot to bear your hand in. The most interesting feature about the place was the hundreds of Fiddler Crabs that darted in and out of their holes all about the place.

Another thing of interest was the large area of low thorny brush on the flat mesas bordering the ocean. This growth was of the same variety that predominates in the vicinity of El Rosario & is apparently its last northern stand of any extent. Birds were nil both along the beach and thru the brush tho the day was not at all favorable for them as dense clouds of fog enveloped the landscape. A lone Cooper Hawk was seen sailing far up on the side of the mountains and was the only one seen so far.

A vast salt marsh covers several miles square at this part of Santo Tomas Bay & would undoubtedly prove a very profitable collecting ground, for both Black & Clapper Rails.

Lunch was taken in Ensenada today after which we drove

into a canyon known as "Canyon del Gallo" about 6 miles east of town. Here we found a small running stream of water bordered by willows, sycamores and most of the other shrubs found in such localities in Southern Calif. with a great predominance of poison oak. Great hills towered on either side, these to the south were clothed in a dense chaparral of Chamise, while the slopes on the north side of the canyon were rocky & sparsely clothed with Buckwheat & Sage. A couple of gardens in the narrow canyon bottom produced a precocious living for the owners.

Birds were not abundant tho the common species were represented - Wren-tits, Anthony Towhees, Calif. Thrashers were heard on the hillsides while Least Vireos, Phainopeplas, Green-backed & Willow Goldfinches, Mourning Doves & Bush-tits were seen in the river bottom association.

A very small dam had been constructed to catch the water in the creek for irrigation purposes by the Dept. of Agricultura y fomento, but the thing was made of lumber & will be torn out by the first heavy rain. However, the engineer's name that constructed or had overseen the work was painted on the rock - in large letters.

We camped for the night a few hundred yards below the dam and while I put up a few birds skins Mr. Wright stretched the canvass up as a shelter for the fog was drifting in over the hilltops to the south, giving promise of a damp night.

I set my traps over the rocky hill slope on the north side of the valley. The place seemed very propitious for *Perognathus*.

We sat up again this evening catching insects by the lantern's light.

June 29th 1925

Heavy fog completely enveloped the landscape this morning and at times sent down a thin fine mist making insect collecting out of the question.

My traps held 3 animals - 1 *Perognathus* & 2 *Peromyscus e. fraterculus*. When I was down to the creek for a bucket of water this morning I witnessed the bathing of a Western Kingbird and to my surprise it did not perch on a shallow rock or on the edge of the water, but plunged into the deepest part from about 10 feet above. This was repeated 5 times in about two minutes and between each plunge the bird would repair to a dead limb in a nearby sycamore & preen its wings hastily. Apparently this was done to insure its being able to fly after the next plunge.



After the fifth dip the bird seemed soaked & then spent about 10 minutes in preening its feathers carefully.

We broke camp about 9 a.m. & drove back to Ensenada where we caught butterflies & beetles on the sand dunes near the town.

After lunch we started north planning to stop on the summit of the high range of hills that extend to the coast about 20 miles north of Ensenada but upon arrival at the place we found heavy moisture dripping fog rolling in and as this would make night collecting impossible we pushed on arriving in San Diego about 8:30 p.m.

August 11 1925

I was informed yesterday that a large flock of Wood Ibises were feeding in the east end of Lake Hodges so planned immediately with Mr. Sefton a trip to the lake with the object of collecting several for the study collection and one for the taxidermy dept.

An early start had been planned but an engagement forced Mr. Sefton to postpone the departure until after noon.

Meanwhile as I was prepared for a hunt in the muddy lake shore, I went down to the Coronado strand searching for Least Terns.

Evidently they had finished nesting & their young were on the wing for not a single bird of that variety was seen.

Near San Diego (south) I saw a fine Forsters Tern flying over.

Notes

San Felipe

Bard

March 20 - May 2nd 1926

March 20th 1926

With a complete outfit and supplies for a month's trip loaded on our Ford I left San Diego in company of Mrs. Canfield at 12:40 p.m. bound for San Felipe, Baja Calif. on the Gulf of California.

Chester C. Lamb & Raymond Gilmore from the Museum of Vertebrate Zoology were also enroute to the same locality & by arrangement were to meet us in Calexico.

After an uneventful journey which was made speedy as possible in spite of the several showers encountered when passing the mountains, Calexico was reached at 5:20 p.m. & not finding the boys on the American side, I filled the Ford's fuel tank to the brim, obtained insurance for the automobile from the U.S. offices and crossed the boundary.

The Mexican officials courteously informed me that I was too late to have the papers sealed & would have to return at 8 a.m. the next morning. Meanwhile Chester Lamb & his assistant were located having only just finished having their load examined & paying \$4.00 duties.

Parking the 2 cars nearby we returned across the border for dinner in relays, Mrs. C. and I going first as it was dangerous to leave the cars unguarded.

After dinner Mrs. Canfield guarded the cars while I returned with Mr. Lamb & his partner, planning to visit my brother Malcolm who operates an oil station in Calexico. Our object was to get some exact data on road conditions to San Felipe as a line of trucks hauling fish were fueling at his station regularly. Much good information was received & he especially advised us to seek the acquaintance of a Mexican fellow named

who had charge of these trucks when reaching San Felipe.

As the international border closes at nine p.m. we were obliged to cut our visit short & return to the Mexican side where our cars were parked.

Driving out of Mexicali about three miles we spent the night near the garito.

Several Burrowing owls were heard during the night making their plaintive call notes from the nearby fields.

March 21st 1926

Up bright and early this morning with rather pessimistic views on the coming appointment with the commandante which is to take place at 8 a.m.

Both Lamb and I had a flat tire which required mending & reinflating. While occupied at this task a Mexican official came into camp & demanded passports. My papers suited his requirements but Lamb's did not & it looks as tho a great delay was in store for us. Returning to the customs office I was surprised to find the man who had called in the camp an hour before to be the commandant & he said my paper was sufficient, however he typed a short note & signed it for the guard at the garito.

Lamb did not trouble to try for passports & got thru the garito without any difficulties. So this being the last barrier we were on our way at 8:55 a.m.

For 25 miles the road to San Felipe led thru the cultivated area - alfalfa & cotton fields on either side of the road. The following birds were noted as we drove along -

(no list of birds, empty page)

Towards the south a large black butte had been visible as far north as Mexicali and now the hill proved to be a regular land mark for our San Felipe road turned from the cultivated area & skirted to the right of it passing thru a beautiful forest of very large ocotillos. Birds were scarce & only an occasional ash-throated flycatcher was seen. After several miles of travel the desert flora we passed close to the willows, how odd it seemed - dense willows now dead on one side of the road & ocotillos, creosote & cactus with rugged distant mountains on the other.

The death of the willow forest, as almost the entire area seemed dead, is due to the diversion of the water from the rivers to the Imperial Valley farms. In former days before this event, this whole area was inundated annually and the hundreds of bayous, carved by the river, new channels were filled with water. This kept a vast area of willows verdant - and what a birds' paradise it must have been!

During the morning I had watched several small clouds over the Gulf of California to the south grow in size until at noon when we had out lunch, the sky looked as tho a cloudburst might occur at any minute.

A half hour after resuming our journey the fears were realized and rain fell sharply for about half an hour. The road was submerged in places & made travel very difficult for the cars slid about as tho the road had been greased! with great flakes of wet mud half an inch thick flying in all directions.

However, fortunately for us the belt of rain-soaked ground was but five miles in width & we were soon out of the mess.

El Mujer was reached about 1:30 p.m. and it was interesting to note how close the Rio Colorado river came to the rocky hills. This point is the farthest point up river that feels the rise & fall of the tides & can be reached by boat from the gulf.

Two pallied Blue Herons were seen standing in a pond nearby as we passed.

A few miles south of El Mujer the road passed out onto a vast tidal flat that was void of vegetation and turned decidedly worse. The trucks used in hauling fish from San Felipe had cut deep ruts into the soft surface which had been caused by a sharp rain two weeks previously and a more bumpy road I had never seen before. Little did we realize when first driving into this marsh that 50 miles of it was to be traveled before dark & that some of it was so irregular that the cars bounced up & down as tho the wheels were eccentric. At first it was a normal sensation but the miles & miles of cordory-like road grew very tiring. After then miles had been traveled I discovered a broken leaf in my rear spring & this gave me no little worry for the rest of the journey.

Great piles of decaying fish were found here & there along the road where trucks had broken or mired down, the cargo spoiled in the hot sun & had been thrown away.

The vast array of white fleecy rain clouds gathered over the distant western mountains and were a source of pleasure to me all afternoon & how I longed to have the time for pictures but no chance. A barren range of hills rose from this sterile plain reminding me of Death Valley with its desolate sterile salt flats and barren sun scorched mountains.

Birds, tho, were none, nor wild life of any kind be expected in such a place.

About sundown we passed an automobile that had been wrecked and all removable parts taken away, leaving the frame & top as a marker of distaster. The skeleton of a modern prairie schooner whose bones marked the highway.

We were now leaving the salt flats which are called on the maps the Llano del Rio Colorado.

The geography of these salt flats was of great interest to me for it appears that the diversion of the river to the farms has not only taken the fresh water from the willows to the north, but also the salt water from these flood plains. The 27 foot tides of the gulf now find ample room to spread up the river channels and are no longer forced by the out-pouring volume of the mighty Colorado river on to the vast

nearly level areas to the west of the river's mouth.

Thankful we were to leave the bumpy salt marsh and get back amid the desert brush with just enough daylight left to put our cots and fix a snack to eat.

I set a short line of traps thru the creosote. This place was located as 40 miles north of San Felipe.

March 22nd 1926

During the night four fish trucks passed, going north, surely this is a well traveled road for a total of 12 machines had been passed going towards the north.

One fellow stopped & chatted with us last night & said that the worst road was yet ahead. This caused some anxiety on our part for the day's shaking had not yet been forgotten.

My traps held two *Dipodomys m. erenevagas* and one immature *Dipodomys deserti*, not much of a catch, but it gave me a thrill of joy to set traps again.

The bad road proclaimed by the truck driver last night proved to be only rough desert road & not sandy enough to cause any trouble.

Passing thru desert washes much small mammal sign was seen as their tracks and burrows were everywhere.

At a point about 100 miles south of the boundary the first of the semi tropical flora was found when copal trees were observed growing sparsely thru the ocotillos, Palo Verdes & Iron Woods.

Farther along a new species of cactus was found, it looks very much like the pitaryas found on the west coast of the peninsula but seemed greener & more heavily trunked.

When within 30 miles of San Felipe a fine black Lark Bunting flew over the road in front of the machine. It did not alight and was watched flying out of sight.

A couple of machines full of tourists stopped & talked with us a few minutes and while talking a fine pair of Western red-tailed Hawks were seen circling overhead. Phainopeplas & mocking birds were abundant while an occasional ash-throated flycatcher was observed.

As I was driving along I chanced to see a round-tailed ground squirrel sitting on top of a small mound in nice 410

range so stopped & picked him up.

Numerous piles of dried or decaying fish were found along the road where the trucks had broken down & the cargo spoiled.

We arrived at San Felipe about noon, tired of the rough, rough ride. A half dozen squalid hovels were nestled on the bleak dry hillside near the large hill that marks the north side of the bay.

From a collector's viewpoint this spot did not have much to offer. There were about 200 ring-billed & California Gulls on the beach with a pair of Duck Hawks cackling overhead - and a fair-sized flock of about 100 surf birds were seen flying near the rocky shore.

A Mexican girl<sup>y</sup> who could speak fair English gave us directions to the spring & it was decided to establish camp at that locality first.

Driving back a mile to the main road we again turned south and found the well just back of the beautiful curving beach about 2 miles south of the first fisherman's camp. Another collection of huts were situated on the beach about 1 mile north of the well but we did not drive in.

Three or four badly mutilated mesquites were found a couple of hundred yards south of the well & camp was established in their shade.

After camp was set up I went to work on my five specimens. Chet & Ray went swimming & rested until trap setting time.

About sundown I scouted about & finally decided to set my traps just back of the sea beach where a scattered growth of creosote bushes were growing. Many small animal tracks were seen in the now dried up annual flower growth.

Aunt May scouted about in a thicket of *Fruitea* nearby & found an abundance of wood rat and round-tailed squirrel sign. The plaintive high pitched voices of the latter had been heard all afternoon.

March 23rd 1926

My traps held a small catch including an apparently new *Perognathus* lighter than anything I have handled before.

Aunt May set out the schuylers & during the day captured 6 *Citellus*. A short hunt back of camp towards the hills resulted in five Desert Thrashers, a Brewers Sparrow (saw 2 small flocks) a <sup>♂</sup> Scotts Oriole that appeared to be

incubating, and a shrike. Birds seemed rare tho Phainopeplas & Mocking Birds were not uncommon, but were unusually shy. Found a Say's Phoebe's nest with three large young almost ready to fly. The nest was situated in a niche in a bank of the old sea beach.

In the evening a pair of Ospreys were seen flying over the surf & a dead, decomposing Red-throated Loon was found on the beach.

The traps were set back in the same locality along the beach again this evening.

A steel trap was made on the beach as a lot of fox tracks were seen in the sand.

March 24th 1926

The mouse traps held another light catch including 4 more of the peculiar Perognathus. The squirrel traps had been left out and held 5 Neotomas this morning.

I went for a long hike on the desert mesa west of camp. I went back to the base of the hills and succeeded in getting into a fairly heavy stand of copals. This tree apparently has no influence on bird life for the leaves were not eaten by insects nor was there any woodpecker work on the branches. Even woodrats seemed to prefer other shrubs for the location of their nests.

Several Scott Orioles were seen but were wild as deer and could not be approached.

Two Red-tailed Hawks were seen perched side by side on a nearby horizontal ocotillo limb & nearby their nest was found situated about 10 feet above the ground in an ocotillo - perfectly safe.

Returning to camp I saw a pair of ravens, several Gambel Sparrows, a small flock of Chipping Sparrows & 24 pelicans flying over camp.

The sky was overcast all morning & threatened rain. However, a brisk southeast wind blew the clouds northward & kept up at such a furious rate that the trap setting was delayed until almost dark - as it blows all the bait from the triggers.

The traps were set at the base of the inner beach line part of them amid a scattered growth of creosote growing in sandy soil and part of them thru a growth of alkali tolerant plants & light fluffy alkali soil.

plants



March 25th 1926

My traps were disappointing this morning and held but a very light catch. However, a species of *Perognathus* was present that had not before been taken by me in this locality - *Perognathus peninsullatus*.

The local form of *Dipodomys merriami* seems very difficult to catch. This fact I attribute to the apparent drought of the past season & probably for the past 20 or more years.

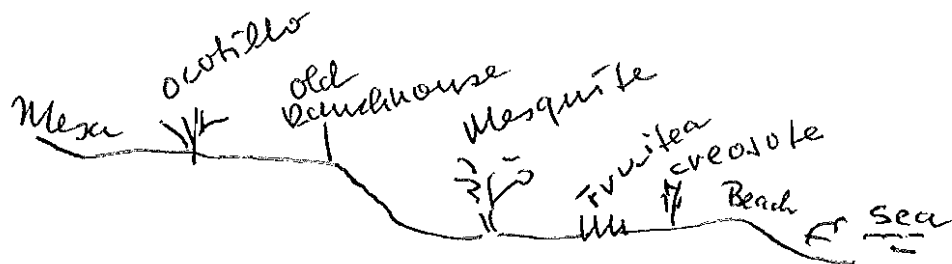
That the rains have been short for several years past is evident in the dead remains of a species of Sand Bean that is found commonly over the sandy areas.

Plants of at least 20 inches across are not uncommon, but all of these large ones show evidence of being dead several years as they are black with age and weathering and have an abundance of spiny red pods while those of the past season are rarely over 6 inches in diameter and have but few red pods.

The geography of San Felipe is interesting. There are two distinct beach levels - the present one and one paralleling about 100 yards inland. Between them on the flat we have our camp and it is in this area that the fresh water is found at about 8 feet below the surface. This water is warm (about 80°) and slightly brackish but not objectionable. Growing over this area are large thickets of *Lyceums* (fruitea) and a fair-sized thicket of arrow weeds. These two species predominate over the area of heavy soil while thru the sandy portions creosote predominates, growing out almost to the beach. Strange to relate - no beach growth is to be found such as we have on the west coast about San Diego.

Several large mesquites are growing between the beaches but are being hacked to pieces by the Mexican fishermen for wood. Several arroyos cut ~~the~~<sup>thru</sup> the beach lines and have brought down such plants from the desert mesa above as Ironwood & Smoke bush.

The second beach line which runs about 25 feet above the present beach in elevation



is backed by a gradual rising plain covered with desert growth, ocotillo, chollas (not common) and along the washes are found Palos Verdes, smoke bushes and farther back near the range of rocky mountains, which lie about 4 miles inland, the belt of copals are found.

This species of tree seems to grow as readily over the mesa as along the washes, some of them reaching a height of perhaps 14 feet and a diameter as great. At this season they were almost leafless. Their newer limbs being a deep reddish color reminding a person of a very stunted apple tree.

In a wash about a quarter of a mile from camp Mrs. C. found a desert thrasher's nest with four eggs. It was situated about 6 feet above the ground in a dense cluster of a mistle-toe, growing in a Palos Verdes tree.

During the day several squirrels were captured in the traps set in the Fruitea thickets near camp. This animal seems fairly abundant and its plaintive single-noted bark could be heard in all the thickets during the warmer part of each day.

A pair of Plumbeous gnatcatchers were building a nest in the fruited near camp but so far have succeeded in evading Mrs. Canfield's search tho she has watched them for some time.

Found the carcass of a red-throated loon on the beach today, spoiled & not saveable for a specimen. In the afternoon the chief of police of San Felipe called at camp to see the papers. My permit saved Lamb's skin again.

The traps were set back along the beach again tonight as the small Perognathus seem to be more abundant here & I am anxious to obtain a fair series of them.

A pair of ospreys perched on the lone giant cactus that stands on the brink of the old beach line above camp and and downed a fish this evening. All during the meal they uttered their plaintive call note.

A single pair of ravens circle the camp occasionally but have not gotten within gun range yet.

March 26th 1926

My traps did not hold an abundance this morning tho several of the desired Perognathus were captured.

On a short hike on the mesa above camp this morning I found several old cactus wren's nests tho I did not see a bird. While walking about searching for birds I heard the

clear call of geese & searching about finally discovered about 100 Snow geese flying about in great disorder high overhead. Watching I soon discovered the cause of their plight for a pair of Duck hawks were striking fearlessly at them tho without fatal results to the geese. Not finding any birds I returned and with Mrs. C. went down to the beach for gulls.

An interesting array was found - great flocks of mixed Ring-billed & Californias were present and an occasional Heerman & San Lucas western gull. These birds congregate along the beach awaiting the return of the fishermen from the fishing banks, so they may feed on the offal.

Elegant & Royal terns were present with an occasional Caspian. The former were in beautiful pinkish plumage & were eagerly sought by both of us.

Several gulls & terns were collected & as a result of so much work on hand the traps were not set.

March 27th 1926

Skinned the birds taken yesterday. About noon Mrs. C. & I went to the beach & collected some more terns. Saw about a dozen Black brant. Several Lesser scaup ducks, many Calif. Brown pelicans & a couple of Western willets. No traps set this evening.

March 28th 1926

We worked all morning on the birds collected yesterday.

About noon Chester Lamb & Ray Gidmore went up to the village & returned in about an hour in company of the chief game warden of this district, Sr. Arturo A. Lelevier of Guaymas, Sonora, Mexico. He proved to be a friend of the late Prof. J.M. Gallegos & a most pleasant person. After seeing my papers he said he would be back here in five weeks with a launch and would like to have me accompany him to the islands of the gulf. Certainly a most pleasant prospect.

When talking with Lamb later he said my papers were o.k. for the whole bunch so guess I saved the day again. Apparently Xavier Rodriguez' permits are not satisfactory in his eyes.

He informed me that they were shipping great truck loads of fish at the village today so I gathered up my camera & went up with him in his machine.

The fishermen certainly did have a catch - all sea bass and some of them 6 or seven feet long. Whoppers. Excitement must run high in the fishing convoy when one of these big boys take the bait!

Gulls were in abundance & in one of the canoes a live Pacific loon was tied with a string.

Several Brewsters Boobies were swimming offshore.

Later in the afternoon we all sat out on the beach waiting for birds but the tide was on the ebb & all of the birds were fishing over the ocean out of gun range. Chester dropped a tern out in the water about 50 yards & was stripping off his clothing to swim for it when a 10 foot shark appeared. Chet put his clothes on & stayed on dry land!

While watching for birds 7 white pelicans flew over.

Traps were set again this evening, part of them thru the sandy beach & part thru the alkali silt.

The traps were examined at 9:30 p.m. and not a single mouse had been taken. A brisk wind was blowing out of the north giving promise of a poor catch this night.

March 29th 1926

True to the prophecy last night the traps held but 2 Perognathus, a very poor catch.

After putting them up I repaired several traps, reset the schuylers and prepared for a hike on the desert.

Mrs. C. pulled her canvas shoes from under her bed & prepared to put them on. Sliding her hand into the toe of one of the shoes to straighten out the inner sole she was stung by some unknown insect on the back of her hand. I picked up the shoe & shook into a large scorpion. The insect had taken refuge in the shoe & was only extracted by the use of my forceps. The wound was treated with permanganate of potash and during the day did not swell but the hand got quite sore.

I walked down the beach about two miles, finding a large dead porpoise well up on the sand where the waves of the highest tides had rolled it. The gulls were feeding on the fly maggots & cases. Careful examination of the beach failed to reveal the tracks of any varmints, proving their scarcity.

While walking along the beach I saw a fishing boat being rowed towards shore. The craft seemed to be in distress, as the waves were slopping over its side. Arriving at the spot I found that the 18 foot boat held 2 men & 20 very large fish & was half filled with water. After a great deal of work they succeeded in salvaging their catch & getting the boat up on the beach.

I struck out on to the desert & found a wash well forested with large iron wood trees. Birds were fairly abundant. I found Cactus Wrens, Phainopeplas, several small flocks of Gambel Sparrows, several small bunches of Brewer Sparrows, several Verdins. Found a Shrike's nest with 5 half-feathered young which I will get later and heard a Desert Thrasher. I shot at a lone Ash-throated Flycatcher in the creosote on the way to camp.

Many old Blue Heron nests were found in the tops of the larger Iron Wood trees and judging from the abundance of white excrement on the limbs of the trees and the ground underneath the young must have been hatched & left the nest already this season.

A Phainopepla taken proved to be a bird of this season on the wing.

Arriving in camp tired I rested a short time then went out to look over the rat traps. The traps were untouched tho nearby under a creosote bush I found a neatly coiled sidewinder. Calling Raymond to the spot he saved the specimen for the U. of Ca. collection after he had photographed it in several positions.

The mouse traps were set again thru the sand beach. The wind had gone down so better trapping can be expected.

March 30th 1926

My traps held a fair catch this morning. Two large Perognathus were new to the collection & proved from field identifications to be P. baileyi.

After getting the specimens prepared Mrs. C. & I went for a long tramp on the desert. Our route was south west from camp and was directed thru a portion of the heavy desert growth found yesterday.

A brisk wind was blowing making hunting poor and but few birds were seen - several Linnets (very wild). Many Mocking birds, many Phainopeplas, 4 desert thrashers (one collected), 1 Ash-throated Flycatcher (collected) & one osprey. The latter bird had her nest in the top of an old dead ironwood tree. She sat until Mrs. Canfield, who found the nest, had started to climb up. The nest contained 3 eggs in what I took to be fairly fresh condition. The nest was composed of sticks with some other material such as remains of sea birds that had been stripped of the breast meat by Duck Hawks leaving the pairs of wings attached to the sternum, a piece of  $\frac{1}{4}$  inch rope about 4 ft long, chunks of sea moss with claws full of sand etc.

The bird was not wild & flew about overhead while we were near the nest and as soon as we were a hundred yards away she settled again on the nest now empty and tried to sit.

On the way to camp another sidewinder was shot. The reptile was coiled in the middle of a small wash & struck without rattling when I was about 10 feet away.

Arriving in camp at sundown Mrs. C. prepared food while I set out the mouse traps. While I was busy at this task Mr. Abbott with Mr. & Mrs. Vandereff as his guests arrived.

We looked over the traps at 9:30 this evening finding 1 wood rat, 1 Dipodomys, 1 Perognathus & 1 Perognathus baileyi.

March 31st 1926

My traps were absolutely empty this morning a most unusual occurrence after finding a small catch as early in the evening as we did last night.

About 9 a.m. in company of Chester Lamb & Ray Gilmore, Mr. Abbott & I went up to the fisher village to arrange for a boat to get out to Consag Rock, which lies about 20 miles offshore.

The only two power boats are owned by Japs & as they had lately been arrested for violating the fishing laws of Mexico their boats were not available. Arrangements were finally made with a native & his sail boat.

En route as we crossed the rocky point east of the village Mr. Abbott spotted an albino shore bird in a flock & I set out in pursuit. Getting within range of the flock I found them to be surf birds and about 300 in number. Several spotted sandpipers were seen as I scrambled over the rocks. The first shot brought down 4 surf birds and the frightened flock then took refuge on the beach, the white conspicuous bird in their midst. The next shot secured the prize & a couple of others.

Ray then took a couple of shots when the flock had settled farther up the beach & secured 12.

The birds had again sought refuge on the rocks where I shot 6 more making 13 in all.

Nearby three longbilled Dowitchers and a number of Western willets and a single Husonian Curlew were feeding and a ♀ red-breasted merganser flew right overhead.

Greater scaup ducks were fairly common & at least 30 were seen swimming just offshore & were scrutinized by Mr. Abbott with his glasses.

Near a small lagoon I shot a large-billed sparrow. Undoubtedly the birds are nesting in the grassy rise about this place & a careful search will be made later.

Mr. Abbott went for a hike over the desert after lunch & saw amongst other things 4 bluebirds. They had the reddish breasts & were unquestionably ocadutalis. Another bird observed that I had not recorded before was one of the ladder-backed woodpeckers, probably D.b. eremicus.

We had made tentative arrangements for transportation to Consag Rock so no traps were set.

April 1st 1926

I had a couple of skins left from yesterday so they were prepared before any field excursions were made. Yesterday Mr. Vandreff had located a Desert Thrasher sitting on 4 eggs. The nest was located in an ocotillo about 3½ ft above the ground in plain view. After I had finished my work Mr. Abbott, Mr. Vandreff & I loaded up our cameras, guns, etc. & walked over to the nest about 10 this morning. Nearing the location I approached first with the gun ready as we desired the bird for a specimen. She proved so tame that I was able to get within 6 ft of her before she even moved her head. I motioned to Mr. Abbott to assemble the camera but before he had finished the process the bird left the nest. We set the camera up on stilted legs that had been extended by the addition of ocotillo limbs tied on with strong thread and left the place hoping that the bird would return.

We stayed away 30 minutes then Mr. Abbott crept back to a thread that was attached to the camera shutter and stretched to a vantage point about 50 ft back of the nest. He found the bird on its nest & made an exposure. He then attempted to change the plate and almost succeeded, in fact he was just cocking the shutter when the bird left the nest. Meanwhile I had worked about into gun range and as the bird flew away I shot her.

After lunch Mr. Abbott & I walked up to the Jap fishermen's camp to see if some arrangements couldn't be made to get out to Consag Rock. But efforts were in vain and only the inescapable Yaki ?? remained with his "manana."

En route a very peculiar duck was seen riding the swells just out of gun range. We made a "dicker" with 2 natives on the beach to row me out after the bird. I got close enough to positively identify it as an old Squaw duck, but the bird

proved too wary to allow me to get within gun range. Oddly enough it escaped by diving and was seen but 4 times after it started to escape.

Near the marsh I shot another large-billed sparrow and on the rocky point where we had encountered the surf birds a flock of 14 black Turnstones were seen. The large flock of surf birds was missing today and but a dozen or so were seen.

Grunions were spawning on the beach and each inrolling wave brought a score or more. Mr. Abbott & I scrambled about over the beach & caught a nice mess for the larder. On our way back we studied the gulls near the fisher village. Lots of California & Ring-billed gulls in all stages of 1st and 2nd and 3rd year plumages were present & offered much complexity in identifying them.

I set my traps north of camp this evening. They were placed thru the creosote bushes & sandy soil on the flat up above the old beach line thru the same association.

April 2nd 1926

My traps held a poor catch this morning - 1 Dipodomys m. & 3 Perognathus.

After getting up the skins Mrs. C. & I went hunting up above the village. We searched the marsh for large-billed sparrow nests without results. I then looked over the rocks for Turnstones or surfbirds. About a dozen of the latter were found & in their midst were Knots one of which I shot. On the way to camp I picked up a dead Pacific Loon that was in a fair state of preservation and had been washed upon the beach by the waves.

Mr. Abbott had taken Mrs. Canfield's gun & gone for a hike on the desert. Returning at sundown he had three immature desert thrashers & a set of six shrike's eggs.

I set about 30 traps this evening thru the creosote sand association in the flat between the beaches.

After dinner Mrs. C. & I skinned 9 surfbirds & the Knot.

April 3rd 1926

My traps held 2 Perognathus & 2 Dipodomys.

Having the birds from yesterday's hunt to prepare no more shooting was done today.

Mr. Abbott went for a hike down the beach but saw nothing worth of collecting.



As they are planning on leaving tomorrow Mrs. Canfield packed up all available skins for shipment.

Lamb & Gilmore were over to dinner with us this evening and we had a pleasant hour spinning yarns.

After going to bed I heard several bats squeaking & saw one flying in the dim light, evidently very late fliers.

April 4th 1926

Our company pulled out this morning about 8:30 & the camp seemed almost deserted.

After completing a lot of accumulated work about camp we had an early lunch and went down the beach towards the village.

The gulls were abundant today. Ringbills, Californians, Yellow-legged, Westerns & a single Glaucous-winged composed the large flock. While watching them a single Bonaparte was seen hovering near the shore. I knocked it down with the 410 & while after another shell it disappeared. Elegant & Caspian Terns were flying over the water and a pair of Red-breasted Mergansers were seen near the rocks northeast of the village. They were fishing in the shallow water & seemed unafraid of the many fishermen nearby.

A flock of 21 Lesser Scaup Ducks were seen on the beach & flushed as we approached. I went over to the rocks where the large flock of surf birds were seen the other day & but 10 of this species remained. Several Western Willets, a dozen Hudsonian Curlew & 4 Spotted Sandpipers were seen nearby.

Traps were set north of camp again this evening.

April 5th 1926

Catch very light owing to decided change in the weather, as about 4 a.m. light rain commenced to fall with a fresh wind from the south. The wind increased during the forenoon & by 12 noon was blowing a gale with an overcast sky that gave promise of rain any minute. About 3 p.m. rain fell sharply for 15 minutes & continued drizzling until sundown.

No traps set this evening.

April 6th 1926

I went for a hunt this morning as the weather was again clear & balmy. On the ocean shore I saw 3 Long-billed Curlew. Many Hudsonian Curlew, a small flock of Least Sandpipers while on the rocky point near the village 10 surf birds and several Spotted Sandpipers were seen. 4 White Pelicans flew over while I was on the rocks. Turning inland above the village I found a pair of Plumbeous Gnatcatchers feeding

young on the wing. Near the base of the small rocky hills that mark the north side of San Felipe bay I ran into 4 Rock Wrens & secured one. They were very wild and not readily approached. A single Scott Oriole was seen flying thru the ocotillos & in a dense wash I saw many Phainopeplas, several Verdins & a pair each of Shrikes & Mockingbirds, both were feeding young on the wing. Costa Hummingbirds were not uncommon.

Returning to camp by way of the beach I picked up several Elegant Terns & saw many Caspian flying out of gun range over the sea.

About sundown I set 9 rat traps on the old beach above camp. Indications seemed to show that *Dipodomys deserti* were not uncommon & I especially wanted them. 3 were taken from the traps at 9:30 p.m.. Saw a small *Myotis* flying over the hill at sunset this evening.

April 7th 1926

Busy with the skins most of the day but broke away about noon to walk up to the village. I carried my Graflex and made some pictures of the fishermen and gulls. Returning to camp I saw 3 Semi-palmated Sandpipers & Mrs. C. shot another Knot. This time the bird was in the midst of a large flock of gulls on the beach.

The schuylers were reset for *Dipodomys deserti* this evening.

April 8th

The rat traps held a single *D. deserti* which I made into a skin while Mrs. Canfield prepared breakfast. Packing up a light lunch we started out for a hunt south of camp.

Yesterday Mr. Lamb had located a Thrasher's nest & promised it to Mrs. C. if she would shoot the bird for him. The nest was about six miles south of camp. My interest in the region was the possibility of securing some Valley Quail as Gilmore had taken two in two days in this region.

About a mile from camp & just back of the present beach line I ran into a sidewinder & killed it with a small stone. The reptile had been coiled in the trail & was frightened out by my approach.

A salt marsh of about 100 acres in area thru the middle on eastway half a mile long was found. The place looked fine for large-billed Sparrows so we walked thru it carefully without results. Close examination resulted in a rather

negative view regarding the inhabitation of this area, by *P. rostratus* for only the giant salarvia was growing there & no shorter spiny grass that seems to offer the best nesting sights. We both looked this marsh over carefully but only 4 birds were seen, 1 semi-palmated Plover & 3 Blue Herons. A two mile hike over a barren salt flat followed the marsh & we were both well tired out when the first brush was encountered. Here the call of a Desert Thrasher was heard & I set out in swift pursuit. The old bird was soon located & I followed it in a large circle. Twice it made the circuit and seemed most anxious about a certain spot. This was noticed by Mrs. C. & she immediately began searching for the nest. This she soon discovered & found three young birds on the point of leaving. The nest was situated in a large fruitea bush & was composed of fruitea twigs bound with vegetable matter.

We waited about 2 hours for the adult birds to return but were only successful in getting one of them.

I found a pair of gnatcatchers feeding grown young.

Further on a pair of shrikes had a lot of young scattered thru the bushes. The song of cactus wrens was heard & two old nests were seen in a low cactus (*opuntia*).

The thrasher's nest found by Mr. Lamb yesterday was located & held 3 eggs with the old desert thrasher sitting closely. In fact I was able to approach within 4 feet of the nest before she flushed. This nest was situated about 2½ ft above the ground in a small cactus. The nest was composed entirely of fruitea twigs lined with grasses & ~~awfe~~ feathers.

We had our lunch in the shade of a large mesquite tree & there I found the remains of a young Road Runner. Later in the day I found Road Runner tracks in the sand. This species is not common here & this was the first time I had found evidence of the bird's presence in this locality. A pair of ravens was seen several times.

The tracks of quail were found but no birds were located.

After collecting the Desert Thrasher & its nest we started back to camp. Mrs. Canfield taking the beach while I went over the desert.

From a small rocky flat I flushed two Horned Larks & collected the male - dissection later proved the bird to be in breeding condition. Desert Thrashers were abundant & I saw many enroute to camp. A lone Texan Nighthawk was flushed from its day roost on a horizontal mesquite limb.

We both arrived in camp at the same time - sundown - and were tired & weary from the 15 mile hike. Mrs. C. had seen a small flock of reef birds & about 40 Hudsonian Curlew on her way to camp.

April 9th 1926

While at breakfast this morning a small flock of Swallows was seen to alight on an ocotillo on the old beach west of camp. Taking the 410 I shot three of their number - 1 Barn, 1 Cliff & 1 Roughwing.

Busy most of the day with our kill from yesterday which was about 20 birds.

About 4:30 the Ford was emptied of all the accumulated goods & with Lamb and Gilmore drove up to the hills 3 miles north of camp to set our traps.

During the afternoon Lamb had been up to the village & visited the rocks by the seashore. He reported that at least 1,000 surf birds were there today. Chester gave me a nice Hudsonian Curlew that he had taken & did not want.

April 10th 1926

An early start was made to pick up the traps. Mine held 7 *Dipodomys merriami* & 7 *Perognathus* while Lamb & Gilmore's combined lines held 1 *Dipodomys deserti*, 4 *Perognathus e. eremicus*. The latter were caught in the rocks.

April 11th 1926

The traps had been set on the sandy desert west of camp back of the old beach line & held a very light catch.

I set the rat traps thru the fruitea brush towards the well and during the day caught several squirrels and wood rats. The latter seem to be active and take bait readily during the day time.

In the afternoon I took my Graflex & walked up to the rocks above the village in hopes of being able to make some surf bird pictures. However, not a single one was seen. The migration had evidently passed. The gulls were also missing & only about 30 were seen about the fish camp.

Scaup ducks were still present as were a few Hudsonian Curlew. On the way back to camp 4 male American Mergansers were seen at 30 yards distance as they flew past & a single Black-bellied Plover was seen on the beach. Caspian Terns still were seen fishing along the outer surf.

No traps were set this evening as I plan to go again after quail 6 miles south of camp.

A fringe of heavy clouds banked the horizon on north & east this evening & flashes of lightning were visible but too far distant to hear the thunder.

April 12th 1926

An extremely violent wind came up at an early hour this morning & threatened to raze the camp. This brought in the clouds & by 8 o'clock rain was falling. The weather was so bad that I had not gone on the proposed hunt & was bailing out the well when the rain came as some Mexicans had put a bar of soap in the water almost spoiling it for drinking. Rain fell for about 2 hours and during a lull many migrant birds were seen amid the brush around camp and all of us from both camps were popping away. The clear call of Killdeer was heard from the beach & Terns both Caspian and Elegant were busy fishing.

The migration of small birds was most unusual. Black-throated gray Warblers were seen and Western Flycatchers seemed to be about in great numbers.

In the afternoon Aunt May & I took our guns & trapsacks and walked up into the copal belt. Woodrat nests had been noted several times amid the iron wood - copal association & close examination of these seemed to indicate the presence of *Neotoma albigula inverta*. The small traps were strung out on the way back to camp starting at the edge of the iron wood - copal association & reaching into the sandy creosote - ocotillo. Bird were not common tho one small bunch of migrants were seen which included Hermits, Black-throated gray & Lentasant Warblers. Mrs. C. found a shrike's nest with four fresh eggs which was left for more. The Osprey was still flying about her old nest.

On the way to camp after dark a dozen desert thrashers were found roosting in a lone dense Paloverde. Getting the tree against the light of the western sky 2 were collected.

Arriving at camp we stopped by Lamb's and found he had hit the migration right. They had hunted the fruitea south of camp & found 14 different varieties of birds. Hermit, B.throated grey, Pileolated Warblers, Hermit Thrush, Green-tailed Towhees, grey Vireos, 3 kind of *Empidonax* & a Golden-eye Duck. Most of these were taken by Gilmore.

April 13th 1926

After an early breakfast we went after the traps. They held a very light catch, 3 *Perognathus*, 4 *Dipo. merriami* & 1 *Dipo deserti*.

found it to be an adult male and lucky it was that I had shot it.

As I was setting the traps the whistle of wings was heard overhead. Scanning the sky I saw three Pacific Loons heading for the pass in the mountains. This course was north-west and directly away from the gulf.

About 11 this morning I carried my Graflex out to the fox den & made some pictures. I had expected some of the young foxes to be caught in the traps but nothing had happened so far. I called at the den this evening when enroute to my trap line & found a baby kit fox in a trap.

When preparing skins this afternoon an English Sparrow was heard chirping in the tree above camp. Quietly getting my gun I spied the bird but could not get far enough away without scaring the bird. However a female cowbird did not prove so shy & was collected.

April 17th 1926

My traps held a light catch this morning tho another baby kit fox was fast by one foot.

The day gave promise of being another "scorcher" like yesterday so I made an unusually early start for the traps. So early that I surprised a cactus wren that was still in its roosting nest & shot it. I had been trying to get this particular bird for nearly a week but it had always been too shy. Several Loons were seen flying towards the mountain pass just after sunrise this morning.

After preparing my specimens I walked up the beach to the rocks above the village taking my Graflex to try a "shot" at the great flocks of surfbirds. Saw a Black Phoebe on top of one of the fishermen's shacks. Only about a dozen of these birds were seen tho several wandering Tattlers had joined their ranks.

The great flock of gulls had decreased until only a few dozen of immatures remained. Evidently the nesting instinct had hit them suddenly & they had departed for the nesting grounds in the north.

I reset the mouse traps this evening, putting them in the sandy creosote association.

April 18th 1926

My traps had a fair catch this morning. It included the female kit fox. Spent the greater part of the day putting a new rear spring in the Ford. Lamb & Gilmore generously helped until the job was finished.

Cacheing the trap sack we went on a long hunt down the wash toward the salt marsh. Mrs. C. found 2 Costa Hummingbird nests, one in a Paloverde & one on a copal. They were both too heavily incubated to blow. In effect the latter had one pipped & a newly hatched young one.

I shot a lone Bluebird out of an ocotillo tree. Mrs. C. heard the trill of a Woodpecker but this one we were unable to locate. A pair of Scott Orioles were found building a nest in a bunch of mistletoe ten feet up in a small ironwood tree. The birds were unusually tame. Nearby a Plumbeous Gnatcatcher was found with three newly hatched young. The old birds were very tame & allowed us to approach within a few feet. The nest was situated in a very small Paloverde 2½ feet above the ground.

Nearby a single woodpecker was flushed from a cactus by Mrs. C. and we followed it briskly for about a mile. Meanwhile it was joined by its mate and by careful stalking both were secured. These birds had led us into a very large forest of Patyar cactuses of perhaps a mile square. Some of the plants were at least 20 feet tall.

In a wash nearby a raven's nest was found situated 20 feet above the ground in an Ironwood tree. It contained four fresh eggs & was left. The nest smelled strongly of fish & was lined with a piece of an old sweater, evidently carried from the village at least 6 miles distance.

A family of desert sparrows were found in the brush nearby & 2 young secured.

Mrs. C. killed a large sidewinder while after a bunch of desert thrashers. this makes 10 taken by the two camps during our stay.

On the way to camp while picking up the mouse traps we stopped at the shrike's nest. It held five eggs that were cold to the touch so were left again. As we were approaching the nest a Prairie Falcon alighted on the opposite side of the nest in an ocotillo. I slipped up within easy gun range & fired. To my surprise the bird flew off fatally wounded, getting lower to the ground every wing beat. It fell to the ground about a half a mile off & was pursued by a Red-tailed Hawk. Arriving at the spot the bird flushed & two shots failed to drop it. However, it alighted in an ocotillo 300 yards away & was killed at close range. Enroute to camp Mrs. C. shot a Scott Oriole.

No traps this evening.

April 14th 1926

We were busy most of the day getting our material prepared that had been secured yesterday. About 4 in the afternoon I walked up to the copal belt to look over the rat traps that had been left set near the rat nests in that association. A single immature specimen was obtained, not much for the five mile trip! I rebaited the traps with bacon & on my way to camp strung out my mice traps thru the creosote association.

April 15th 1926

My traps held 5 *Dipodomys m.* and the rat traps were empty. This was disappointing after the long hard walks to the traps. The mouse traps were left out to be reset this evening.

I went out about 4 this afternoon and rebaited my line of mouse traps. On the way back I took a circuitous route & had the great luck to discover a kit fox den. There were five holes leading down under the creosote bush and several sizes of tracks were all about in the soft sand. I was first attracted to the spot by a skulking animal that I later discovered to be an adult, keeping behind bushes just out of gun range. Nearing the spot the beast disappeared down a hole. Examination of the place showed 4 well used entrances to the den with tracks all about. Evidently this was the home of a pair of kit foxes & their young were old enough to come out of the burrow to play.

It was rather late so I gave up the idea of going back with the steel traps this evening but decided to go over the old beach hill & pick up the 2 steel traps set several days ago. I had not looked at this set for several days as I had no fresh bait to put out & the fish head I had used before was all dried up. On my way over I set 2 schyulers for deserti.

Arriving at the steel traps I was amazed to find the remains of an adult female kit fox that had been caught in the trap, died & had been eaten by buzzards. This was indeed hard luck

April 16th 1926

My mouse traps held a very poor catch. On my way out to look at the mouse traps I carried 6 steel traps to be set at the fox den. As I approached the place the old fox was seen leaving. While setting the traps a small fox was seen skulking in the creosote nearby. It acted so tame that I thought it to be a young one and almost gave up the idea of shooting it. However, better judgment overcame me & I killed it with a charge of 8s. Upon skinning the animal I



The traps were rebaited this evening.

In the late afternoon a sharp shower fell & towards the north heavy clouds enveloped the sky and appeared to be giving the salt flats a good soaking.

April 19th 1926

My traps held a very poor catch this morning so decided to shoot some gulls if there were any living on the beach.

Lamb & Gilmore left for Mexicali this morning. In view of the rain that must have fallen yesterday it did not seem wise to me but they decided they were through trapping & the hot weather made them anxious to leave.

I shot several gulls & spent the afternoon preparing them. Long-billed Curlew 2, Hudsonian Curlew 4, Willets several. Spotted Sandpipers, Western Sandpipers, Least Sandpipers, Farallon Cormorants 25, Calif. Brown Pelicans & a single Bonaparte Gull were seen.

I obtained some fish at the village & set three steel sets this evening.

Bats were heard again late this evening but was unable to see them.

At sundown 4 Red-winged Blackbirds were seen flying southward. These birds seem to be wandering about rather irregularly & have been seen several times.

April 20th

My mouse traps held a surprise for me this morning when I found a *Perognathus bombyan* in the last trap. The taking of this animal spurred me on to trapping harder & I changed half my line this evening. It may be that part of the tails I have been chopping off the *Perognathus* lately have been off this tiny species so I put some extra wide triggers on the mouse traps.

Saw several more Loons flying inland this morning at daybreak. Just why they should only be seen at this early morning hour arouses considerable speculation.

My fox traps held three more babies making five now taken. No doubt this is the last of the litter as they appeared to be very poor & were probably driven out of the den by hunger. This is the pathetic side of trapping. I kept two of them alive until I reached camp. There I photographed them before killing.

While taking a swim this afternoon two beautiful Red-breasted Mergansers flew in very close range.

I rebaited the mouse traps where the tiny Perognathus had been caught & set the traps picked up this morning nearby.

April 21st 1926

A very large coyote was fast in a steel trap this morning. It must have been caught early in the night for it had nearly eaten up the large creosote bush to which the trap was fastened & it was only good fortune that it had not escaped - trap and all. My mouse traps held a short catch of Dipodomys & medium sized Perognathus.

Early this evening several bats were seen flying about & I shot two. They proved to be *Pipistrellus hesperus*.

April 22nd 1926

Another coyote was captured this morning and but two animals were in the mouse traps. After getting these few specimens prepared I set out for Mrs. Canfield's raven nest about 6 miles south of camp.

Enroute I looked at her Scott Oriole found several days ago. It contained three fresh eggs & was left.

The raven's held four eggs - the same number it contained when found 6 or 7 days ago. One of the birds was shot for identity.

On the way back to camp I found an Ash-throated Flycatcher's nest in a Woodpecker's hole in a giant cactus. It contained four partly incubated eggs. The nest was lined, as usual, with animal hair & close examination disclosed the source from which the bird had obtained the desired nest building material. It was gleaned entirely from coyote dung - a most unusual thing. This goes to show the co-relation between even a coyote & an Ash-throated Flycatcher!

A Gila Woodpecker was seen flying some distance away & I set out in swift pursuit. After a mile of chase I got close enough for a shot & secured the bird. Brewer Sparrows were still very numerous in the creosote association & a specimen was shot.

I rebaited the traps again this evening & watching for bats after supper but saw none, so guess the migration has passed.

April 23 1926

This morning I had another coyote in my traps & the mice traps held another of the desired tiny Perognathus. A very

strong wind had blown during the night & several new migrants were about in the fruitea bushes this morning. While skinning the coyote a Lincoln Sparrow was shot and a Yellow Warbler was taken from the mesquite in camp.

After lunch I walked down to the village in search of another *Larus livens* but was surprised to find that less than a dozen gulls remained on the beach. The reason may have been however, that the fish trucks had stopped coming. Evidently on account of bad roads due to rain and there was no fish offal for the gull to feed on. This feature worried me some as I had planned to leave Sunday for Calexico. The only bird worth collecting on the beach today was a Black-bellied Plover.

I rebaited my traps again this evening & began to pack up preparatory to leaving.

April 24 th 1926

My traps held one more of the tiny *Perognathus* and several other animals. After getting them prepared we commenced to pack up in earnest as tomorrow we leave. The day was a real "scorcher" and scarcely a riffle was on the gulf. This sort of weather only hastened the departure and by evening all specimens were packed.

In the afternoon I went up to the village to try for another gull while Mrs. Canfield went down the beach on a last shell hunt.

On a small reef a mile southeast of camp she saw a dozen surfbirds while I saw several wandering Tattlers, 3 Spotted Sandpipers, 20 Least & Western Sandpipers and half a dozen immature Calif. & Ring-billed gulls. Even the Elegant Terns seem to have deserted the beach as only a single or two were seen when 10 days ago there were dozens. The straggling Caspians seem to still be around. I also saw a pair of Red-breasted Mergansers & about 20 Scaup Ducks probably Lesser.

I picked up all the coyote traps this evening & rebaited the mouse traps for one last try.

April 25th 1926

Was out and going very early this morning. In fact I was 2 miles out on the desert from camp when the sun peeped from the eastern horizon on my way to Mrs. Canfield's Scott Oriole nest. It was found to contain 4 eggs but by bad luck one was punctured when being removed from the nest. I then made a run for the Osprey's nest as I did not want to leave a good set of eggs without trying to get them. I found the old

bird present but building a new nest about half a mile east of the old one. It was only half completed so I doubt whether she will lay again this season.

I had the kodac and made some pictures of the old nest and desert scenes. The clear call of a White-winged Dove was heard in the copals near the old Osprey's nest.

I arrived in camp at eight o'clock after a 10 mile walk. We packed up and after a farwell service at mid day left for Calexico at 1:15 p.m.

As I drove up thru the rocky gorge near San Felipe a family of Desert Sparrows were seen & two collected. They were never prepared, however as the heat of the afternoon ruined them.

I was interested in measuring the distance north of San Felipe that the Patyae cactus & copals grew & found scattered plants of each as far as 31 miles north. Sidewinder tracks were abundant in the wheel ruts in the sand and scarcely a hundred yards of sand was passed but that tracks of this viper were seen.

I arrived at the salt flats at sundown and decided to keep going.

At first the road seemed good but after 10 miles had been traveled it commenced to show signs of moisture. Soon a couple of loads of decaying fish were found and the real wet roads commenced. The sky was rapidly clouding over & flashes of lightning made an ominous appearance towards the south east.

A bad spot was found & the Ford stuck. Opening the tool box I took out a couple of dog chains that had been wired on my steel traps & wrapped one securely on each rear wheel and fastened it with wire. This ended the trouble and at midnight drove off the salt marsh after traveling 41 miles of it, all after dark.

Inquiring at El Mayor I found that Lamb & Gilmore were camped nearby & so looked them up.

They had some mail & reported a most terrible trip up, having been 3 days enroute, one day only 9 miles were made after breaking the front spring in their car.

It had been planned to spend a few days at this station but the mosquitos were so terrible that we went on traveling until about 1:30 a.m.

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We tried to rest but the mosquitos were so vicious that sleep was impossible. I tried to burn bushes for smudges but this was only partially successful.

April 26th 1926

An early start landed us at the border about 7:30 & it was necessary to await the American custom inspector's arrival before going on.

He arrived at 8 a.m. & was most courteous & passage was made without the slightest difficulty. After having some work done on the Ford we set out for the vicinity of Yuma, arriving at the ranch above Bard about sundown.

April 27th - May 1st

The desired objective of this side trip was the collecting of a series of topotype Round-tailed Ground Squirrels & all efforts were made in that direction.

Some migrating birds were seen as on April 28 a half dozen Audubon Warblers were seen & a scattering flight of Western Tanagers. Blue Grosbeaks & Lazuli Buntings were just arriving.

On May 1st a small bunch of very young Gambels Quail were encountered & a couple taken.

After collecting 10 of the desired squirrels I left very early in the morning on May 2nd arriving in San Diego about noon of that same day, thus ending what may prove to be a profitable trip.

DRAFT

## Scammon's Lagoon Trip

Monday, May 17, 1926

At an early hour this morning I loaded my assembled outfit on the Ford and carried it to the Municipal Pier, where the diesel engine trawler, "Huchum," awaited our arrival. After a good deal of trouble, we finally assembled for what was hoped to be a very interesting two-weeks' trip, with the objective of Scammon's Lagoon.

The party comprised of Griffing Bancroft, with Wright H. Pierce and Al Krookels as assistants, and with George Cantwell as my assistant. The boat was owned by Mr. Ora H. Seeley, with Al Richards as mate.

Finally all was made ready and the ship left the dock at 3:20 in the afternoon, bound for the Coronado Islands as the first stop, where we arrived after an uneventful run over a smooth sea. Sooty and Black-vented Shearwaters were seen en route.

We landed on Little Middle Island, where a hasty survey was made of some of the more prominent crevices and the big cave on the south end. Two pairs of Petrel were found - one Black and one Socorro - both pairs of mated birds being present in the burrow. They were collected. The Gulls seemed to have preempted this island for a rookery and numbers of nests were found about the island, containing partially completed sets of eggs. In the big cave on the south end of the island, Bancroft located two single Hurrelet eggs on the western side of the cave, while I found two singles on the eastern side of the cave. Mr. Cantwell picked up several sets of gulls, but, when descending a steep,

perpendicular spot in the trail, his basket slipped and they were all broken.

We set sail from the Coronados at 7:15 P.M., bound for the large rock in the middle of Descanso Bay. Bancroft wished to inspect this and try a landing at midnight, which seemed, to my mind, a most hazardous undertaking. However, Captain Seeley proved capable of the situation and also extremely competent in his navigating, for the island was found in the middle of a dark, foggy night, and such a surf was breaking over it that Bancroft was easily talked out of any attempt to land. However it was discovered that, by proceeding onward, to Ensenada, where we had to get our clearance papers for the journey to the southward, we would gain no time by moving on, so we dropped anchor and stayed overnight in the vicinity of this island.

Tuesday, May 18, 1926

Dawn found a cloudy sky and a combing sea and, as soon as it was light enough, the skiff was dropped overside and Mr. Seeley rowed Pierce and me around this small islet. Apparently there were no nesting birds there and sea lions, Zalophus, were crawling over it, even to its highest parts. The island was completely whitewashed by the droppings of numerous sea birds and we saw California Brown Pelican, Heermann and Western Gulls, Farallon and Brandt Cormorants there in abundance. We had expected Oyster-catchers, but none were present.

Heaving the anchor in, we went on to Ensenada, where we arrived about 9 A.M. and were boarded almost immediately by the doctor and customs inspectors. They found nothing dutiable and the captain was allowed to proceed with the usual procedure of obtaining his clearance papers at the broker's office. We found

that our papers would not be ready until the middle of the afternoon, so permission was obtained for the boat to take us to Todos Santos Islands and return in the middle of the afternoon for the necessary papers.

We arrived at Todos Santos Island at 12 sharp and, as lunch had been served on the way, we immediately proceeded with the collecting. It was the first time I had ever landed on this group of islands and I was most pleasantly surprised, as they proved to be by far the most beautiful insular spot that I had ever set foot upon. Bancroft, with his two assistants,, set out toward the south end of the island, in search of a Duck Hawk's nest, while George and I proceeded to search the nearby slopes for such birds as Rufous-crowned Sparrows, Belding Sparrows, etc. Much animal sign was observed and the two species known from the locality, Neotoma l. anthonyi and Peromyscus m. dubius, must really be abundant. Dusky Warblers, Hyman Western Gull, Black Oystercatchers - pair, Duck Hawks - pair, San Clemente House Finch - common, Western Raven - two pairs, White-throated Swift - one, Farallon Cormorant - many, Kingfisher - one, Rufous-crowned Sparrow - abundant, California Brown Pelican - many, Sparrow Hawk - pair, Belding Sparrows - abundant, Brant Cormorant - fairly common, were the birds seen. George and I collected about an hour and a half, getting a fair representation of the birds we wanted, and then, embarking on the "Huchum," we proceeded to prepare our specimens, while the ship went to Ensenada for the necessary papers.

We returned about sundown and found a disgruntled bunch of egg collectors, for they had taken but a single set of three Duck Hawks. However, on an outlying island, Pierce had seen an Oystercatcher sitting in one spot for over an hour and it was decided to try to land on this rock. The landing was



effected and a nice set of two Black Oystercatchers [were] taken after dark. We then set sail for an all-night run to San Martin, where we arrived the next morning at 6 AM.

Wednesday, May 19, 1926

On approaching the island in the early morning light, vast numbers of Cormorants and Gulls were observed on the gentle northern slopes of this islet. So numerous were the Cormorants that great patches which seemed black in the distance proved, on close approach, to be masses of these birds. A rather high cliff bordered the beach on the northern side of the island, and, skirting the kelp at a distance of 300 yards from shore, we shot the rifle into the cliff, in the hope of flushing a Duck Hawk. However, on the third shot, a shell jammed and we were unable to do further shooting. Several pairs of Ospreys were seen flying about and, in one case, the bird was on its way to its nest, with a fish in its talons. The fish was flipping, but the Osprey held it head foremost in the direction of its flight.

Rounding the southern end of the island, a quiet bay was found. This is a general stopping place for all the coastwise fishing boats, for it is seldom rough in this bay and it is midway between the lower coast fishing grounds and the markets in the States.

As of yesterday, we had had our food while on the move, so, shortly after the anchor was dropped, we went to shore on our hunting expedition. The island proved extremely rough, being of volcanic origin, and it was broken up in huge blocks of sharp lava. It was necessary to hop from one block of stone to the next, making travel very treacherous and slow.

I had heard of a colony of Great Blue Herons near the top of the island and, as I was keen to obtain some specimens of this species, George and I set out in that direction, picking up anything we could see en route. Bell Sparrows were not uncommon and, by the time we met again near the summit of the island, we each had several specimens of this species in our hunting bags. A Rock Wren has been described from this place by Mr. Swarth of Berkeley and, as we were keen for a series of them, special watch was kept. George proved the more fortunate for he had two by the time the summit of the island was reached.

The top of the island, which has an elevation of perhaps 1,000 feet, proved to be a well-formed crater, with a diameter of about 200 feet and a depth of about 75 feet.

After looking about from the summit, getting grand views of the surrounding mainland to the eastward, I descended toward the west side of the island. Near the base of the extinct volcano, I ran into a dense chaparral of Lycium, intermingled with an almost impenetrable thicket of small chollas. This added a great obstacle to travel when in company with the irregular lava, as it grew readily in the cracks between the rocks. However, it seemed not to deter the nesting Cormorants for, in spots which they had selected for their colonies, their nests were built in this vegetation, regardless of the trouble it might cause the young when they were hatched. The excrement had had [a] deadly effect on the vegetation and I presume that, before the young were really able to leave the nest or wander, the vegetation was dead or beyond the point of injury to the young. A pair of Osprey had their nest in this part of the island and I found that it contained three small young, perhaps two weeks old. The old birds were very tame and flew, with shrill cries, close overhead.

On my way back to the boat, I was fortunate enough to pick up a couple of Rock Wrens and a few lizards. Near the landing were a couple of isolated graves, where perhaps some fishermen had passed out and been buried by their companions.

Birds seen on the island were Spotted Sandpiper, Western Raven, Western Gull, Farallon Cormorant, Bell Sparrow, Rock Wren, Osprey, Duck Hawk, several Turkey Vultures, two Mourning Doves and a Great Blue Heron.

Baneroff and his collectors came in about 11:30, after having had a very unsuccessful trip to the western side of the island. For their trouble they had a single young Duck Hawk and several Rock Wrens for me.

We left San Martin Island about 12:45 bound for San Geronimo Island, where we arrived at 6:45 PM. It was too late to go ashore collecting this evening, but, as it was type locality of Peromyscus m. geronimensis, I sent George ashore with the trap sack, instructing him to set about 30 traps. Meanwhile I was busy at work with the accumulated specimens from San Martin.

The boat rocked something terrible during the night,, as we had to anchor more or less in the open sea and, by morning, Baneroff, Pierce and Kreckels were not feeling their best.

Thursday, May 20, 1926

In the morning Pierce and I went ashore to get the traps in and, of 32 traps that George had set, 29 contained Peromyscus. They alone gave prospects of a real day's work ahead.

After breakfast, Bancroft and his assistants went ashore, taking a shovel with the idea of digging out some of the Shearwater burrows that were everywhere on this island, while I took my Torsion scales and set them up on the beach, out of the wind, to weigh the morning's catch, after which I returned to the ship to work. About 10 o'clock Bancroft came back and reported a pair of Oystercatchers on the beach nearby and so, after putting my gun together, Captain Seeley rowed me to the point where the birds had last been seen. I took one shot at them, but missed, and was then landed so that I could follow them along the shore. I finally succeeded in getting both birds at one shot. One proved to be a Frazar Oystercatcher and the other a Black Oystercatcher. Incidentally, one was male and the other female, although I doubt very much whether they were a mated pair.

Cassin Auklet, Osprey, Western Gull, Brown Pelican, a single Mourning Dove, Brandt Cormorant, Farallon Cormorant, a single Wandering Tattler and a Spotted Sandpiper were the only birds observed on this island.

We left San Geronimo Island at 11:45 this morning, with our next stopping place at Scammon's Lagoon.

Friday, May 21, 1926

After a rough night run, for we hit the tail end of a heavy blow and the boat took her spite out on the passengers, we arrived off Scammon's Lagoon about 7:30 AM, after having passed Santo Domingo Landing, or, as known on the charts, Lagoon Head, at an early hour. I cast longing eyes in that direction, for I should have liked very much to stop for a few rats from there, much to the disgust of the other members of the party.

Fortunately, the sea had quieted and we were able to cross the bar into Scammon's Lagoon with hardly a realization that the bottom was just 12 feet beneath the surface of the waves. Mr. Seeley informed us that, of the many times he had been in this Lagoon, this was the easiest passage he had ever made over the bar. I was quite impressed after we went into the quieter waters of the Lagoon, to see the huge sand beach lying on either side of the entrance. In places it seemed a mile in depth and had an altitude in places of 700 feet, and not one vestige of vegetation over this wind-blown sandy area. On the southern side of the entrance, we found a small marsh sandwiched in between the sand dunes and the water.

As we neared the shore, and made ready to drop anchor, several familiar birds were seen. A single Black Brant stood on the sandy shores, while wandering about further up the beach we saw a number of Long-billed Curlews, Hudsonian Curlews and Western Willets. A dozen Lesser Scaup Ducks were swimming in the quiet water nearby and, toward the marsh, a single Reddish Egret, the first I had ever seen in my life, and a couple of American Egrets, were seen.

We lost no time in getting ashore and so anxious were we to get started at our work, that we piled in, shoes and all, when the skiff touched bottom. Numerous small Marsh Sparrows were seen and immediately George and I began collecting a series of them, while Bancroft and his assistants proceeded on the egg hunting scheme. After an hour or more at this location, and after we had collected a number of birds, we started back to the ship. George had had some hard luck for, almost as soon as he had landed, he got into some soft sand in an estuary and had plugged the muzzle of his gun with sand; neglecting to clean it out, the muzzle had been blown off, leaving him gunless, or nearly so, for the

rest of the trip.

While on shore, in the distance to the eastward up the Lagoon, a large boat was seen moving about. This ship later proved to be Mr. Bernstein's trawler "Merriam," and was in search of fresh turtles for food for their cannery camp on Cedros Island. At this place we saw Royal Terns, a few immature California Gulls, Wilson Plover, besides the other birds aforementioned.

About 10:30 we again set sail, going eastward up the Lagoon to search the various island as we came upon them. At one place a small island was found to contain at least a dozen pairs of Frazar Oystercatcher. I did not land on this island as, with the accumulated work, George and I had enough to keep us busy the rest of the day.

In the late afternoon we overhauled the "Merriam" and learned that an island several miles further on had quite a colony of Oystercatcher resting on it, so we set out for that island and arrived about 4 PM. We stayed there until dark, when Captain Seeley had to feel his way back to the anchorage near the "Merriam."

On shore near this place a turtle camp had been established and three or four Mexicans had spent the past two months capturing and drying turtle meat. It was decided that George and I might get our traps out this evening, so they were set at 9:30 by lantern light

I picked my traps up at daybreak and found they contained a fair catch, including Dipodomys, Perognathus and Peromyscus n. cooledgei. After some planning between Bancroft and myself, it was decided that George and I could

land our equipment and spend a night or two at this camp, so all preparations were made and we established ourselves in one of the empty turtle camp tents and were comfortably situated for a day of good work.

Meanwhile, the "Huchua" sailed out for the northern part of Seamon's Lagoon, where two large islands were known to harbor numerous colonies of nesting sea birds.

That evening George and I set our traps over the ground to the south of the camp. This proved to be mainland and was covered with a very sparse vegetation, composed chiefly of Lycium, Euphorbia and a very stunted species of Ocotillo. Very little animal sign was evident and, searching as hard as I could, I could find no indication of the large, five-toed Dipodomys that I was extremely anxious to capture.

During the night coyotes were heard in many directions, evidently coming to this location for the offalls from the turtles and numerous trails out from the tents proved that they were constant visitors.

Sunday, May 23, 1926

My traps held a fair catch this morning, which included a lot of Perognathus arenarius, a species that I was extremely anxious to get, and with which I hoped to complete some work done earlier this year in vicinity of San Felipe on the Gulf of California. My prophecy in regard to the large Dipodomys was true and not a single specimen of the species was taken, although several of the small, four-toed merriami groups were collected.

Land birds were extremely scarce at this point and, while setting and

picking up the traps, I saw but three species, one Desert Thrasher, one Shrike and several Horned Larks. The first two were collected. A family of Ravens were constantly about the sea shore, where they were feeding on the refuse from the turtle camp, in company with a couple of dozen Western Gulls.

About 10 o'clock, after we had just settled ourselves for a good day's hard work, the distant purring of an engine was heard, and, peering from underneath the tent, I saw the "Huchum" coming down the stream, to my disgust. Half an hour later Captain Seeley was in camp, with the information that Bancroft wanted to pick up and take us over to the bird islands, where they had made a great killing on many species of birds -- Reddish Egrets, Frazar and Black Oystercatchers, Farallon Cormorants, Western Gulls, Louisiana Herons, Royal and Caspian Terns, and Ospreys.

This rather upset my plans, much to my disappointment at the haste, but, after a certain amount of grumbling and sputtering, we picked up and packed our outfit and, within an hour, were on our way to the island. We arrived at the island, where Al Richards, Pierce and Kreehels had been left at about 3 o'clock.

George, Bancroft and I immediately landed and began collecting. I took my camera ashore but had so little time that very few pictures were made. A large colony of Royal Terns was nesting on a shell-covered island near the channel and the eggs were hardly distinguishable from the multitude of shells. However, as soon as they were flushed, the Gulls settled in and cleaned them out and only by good fortune was I able to save a couple of dozen eggs for specimens. The Reddish Egrets and Louisiana Herons were nesting commonly in the marsh vegetation above the high water mark and Oystercatchers we met everywhere.



We had a most glorious hour wandering around through the colonies, picking up a few sets here and there and taking birds as they came our way.

Late that afternoon we pulled anchor and moved over to another island to the northwest. It was from here Captain Secley was supposed to take me down near the entrance of Seamon's Lagoon to set the traps, but it was so late that it was given up.

Meanwhile Bancroft, Pierce and Kreckels discovered a great colony of Herons, which included Black-crowned, Yellow-crowned Night Herons, Louisiana, Great Blue Herons, Reddish Egrets and Brewster's Snowy Egret, together with another colony of Caspin Terns and a great bunch of Royal Terns with babies. The ever-present Western Gulls were nesting commonly along the sea beach, amidst the driftwood that had been cast up, and several pairs of Oystercatchers were inhabiting this island. In all it gave promise of a very busy day on the morrow.

Monday, May 24, 1926

We all went ashore this morning with our complete outfits. I had my cameras and my gun and, as the day was overcast, it seemed quite wise to make such nest pictures as we wanted, so Pierce and I set out on a photographic expedition, making a picture of each of the species of Herons in situ.

Meanwhile Bancroft and his assistant, Kreckels, discovered a Clapper Rail's nest with three eggs, a most glorious find. Further along, Kreckels discovered another Rails' nest, with two newly hatched young and three pipped eggs. The old bird was quite solicitous of her babies and was later collected by me, with the whole clutch. We were very glad to be certain of this bird's presence and

it added another bird to the list that it was necessary to collect and which gave prospect of a good deal of difficulty in collecting.

The greater part of the morning was spent making photographs, while George returned to the ship with a few specimens and started to work. In the afternoon I hid in a small depression near the colony of Snowy Egrets and collected several, together with some Reddish Egrets that came near. When the sun appeared in mid-afternoon, Pierce and I both made a lot of flight pictures of Terns with my Graphlex.

It was quite interesting to watch the poor Terns protect their young from the Gulls, for it seemed as soon as the young were left unprotected by the adults, the robber Gulls would pounce upon them, carrying them aloft about thirty feet and dropping them, continuing this procedure until life is extinct and then the poor unfortunate baby is torn apart by several gull, just as several dogs tear a rabbit to pieces after the chase. However, we were very careful not to molest the bunch of babies, which the old birds had cautiously driven into one compact mass for protection and but few casualties occurred. We laid over that night at the same anchorage, with hopes of further work on the morrow.

Late in the afternoon Kreckels found another nest of Clapper Rails. This one contained seven fresh eggs and was indeed the capital take of the trip. A Long-billed Curlew cried overhead on several occasions when we approached a certain portion of the marsh and, although I have not had experience with this species on its nesting ground, the bird's actions gave every indication of the species' nesting.

Tuesday, May 25, 1926

During the night a terrific wind sprang up from the west, filling the air with sand, which was even blown out on to the boat a distance of several hundred yards from the shore. However, this did not stop the collecting operations, for immediately after breakfast we set out on a Rail hunt to another island just north of the one visited yesterday. A fruitless hour was spent at this place, when we decided to return to the old island on the chances of being able to flush some of the birds when the tide was high and in which we were successful, picking up three more adult Rails. I again hid in the depression used yesterday, from which I had shot Herons, and picked up a few more Louisiana, Yellow-crowned Night and Brewster Egrets.

Going aboard the ship about one, in time for lunch, we set sail for the extreme eastern end of the Lagoon, where we hoped to get in a good night's trapping on the mainland. We got to the end, which was perhaps 25 miles inland from the entrance of the Lagoon, about 4 in the afternoon. We were still a mile from the shore when the ship suddenly grounded. It was decided that we would stay there for the night.

We immediately put off with our guns and trap sacks to explore the mainland to the eastward. Mr. Seeley rigged up his outboard motor on the large skiff and we were soon ashore. The usual bunch of non-migrant shore birds was present, including Long-billed Dowitcher, Long-billed Curlew, Hudsonian Curlew, Western Willets and a few Western Sandpipers. The beach was strewn with the dead carcasses of hundreds of Pacific Loons that had evidently died during their migration. The prevailing westerly winds had gathered all of them up and cast them on this particular strip of beach. Coyote tracks were abundant over the

soft ground where they no doubt came down nightly to feed on the rotting carcasses of the Loons. A great colony of Snowy Plovers was nesting here and numerous young were later found by Bancroft and his assistants along the shell-covered beach. George and I went inland, I getting as far as four miles from the shore, and found nothing but a few scrubby bushes, with an occasional scrubby Ocotillo, a form peculiar to the cape region.

The only birds noted as I left the shore were a few dozen Horned Larks, of which I was able to get in range of a single male. The wind, which had sprung up last night, had not abated, making Horned Lark hunting difficult. Searching as hard as we could for signs of animal life, we were unable to find anything that seemed worthy of trapping.

When we returned to the ship in the late dusk, our traps were still in the sacks, unset. Bancroft had had the only good fortune in the shore party, having found a nice set of three Marsh Sparrows. The Horned Lark proved so interesting that I determined on going ashore next morning for a two-hours' hunt, endeavoring to collect a good series of them.

During the night, when the tide went out, the boat rested on a mud bar and almost tipped us from our bunks.

Wednesday, May 26, 1926

Captain Seeley put me on shore this morning at a very early hour and I started searching for Horned Larks. On the way to the Horned Lark flats, which were to the eastward of the shore, I searched through a small salt marsh where Marsh Sparrows seemed abundant. The habits of these birds were somewhat similar to those of the Belding Sparrow found commonly in the marshes about San Diego

Bay, but their song was less musical and more of a monotone and given at greater intervals than our Belding Sparrow to the north. The birds had the same habit of perching on the tip-top of the Salicornia, but their song was given for the inside of the bush more often than it was given from a high perch. The song seemed to lack volume, also, and was not audible to me over a distance of 75 feet.

I was fortunate in locating a nest with two eggs. It was built of such material as the bird could find in the salt marsh, a species of flat, dried grass and was situated on the ground in the short Salicornia and was plainly visible for at least 20 feet. The incubating bird flushed as I approached. I spent a vigorous hour after Horned Larks and collected six. These were taken on a flat bordering one of the huge salt sinks that lie east of the Lagoon proper.

Returning to the ship at 9 o'clock, I again went through the salt marsh, shooting a half-dozen Sparrow as I went. The tide being out, we pulled in the anchor and started for the entrance to the Lagoon, where it was planned to lay over that night and get an early start for San Diego the next morning. On our way up the Lagoon, we stopped at two different islands. The first one was a low island with but little area that was not flooded at extreme tides. On this we hoped to find Oystercatchers, but found nothing of interest except one large American Egret that flushed when we landed, and a solitary female Buffle-headed Duck which I shot. The specimen was in poor plumage, and could not be saved.

Embarking again, we spotted at another island to the eastward where Pierce had found a lot of Wilson Plovers on the day we arrived. As we were dropping anchor, three Mexicans with their camp equipment came alongside in a rowboat. This was evidently the other members of the turtle camp which had been robbed by

Crooked-neck Jones and were cursing him to the height of their voices and the extent of their vocabularies. This island proved to harbor a nice bunch of Wilson Plovers and we got a fair series of them. At least a dozen pairs of Frazar Oystercatchers were present and several pairs of Marsh Sparrows, while a flock of about fifty Black-bellied Plovers were seen. I fired in their midst and collected a single individual, which was later fed to the Duck Hawk, owing to the fact that we had no time to prepare it.

After hauling in the anchor, we set sail for the entrance of the Lagoon, it being nearly 3 o'clock in the afternoon. We had little time to lose if we wished to make an anchorage and, getting our traps out for a last try at animals in this locality, we sped on our way. Fortune, however, was not in our way and the boat bumped on to a mud bank and we lost fully three-fourths of an hour waiting for the tide to rise before we could float. After getting started, we again stuck on the mud bank and it was not until sundown that we were able to get off again. This made the chance of trapping almost impossible, although we got to our anchorage at 9 in the evening.

After a council of war with Mr. Bancroft it was decided that we should try to set traps, by lantern light, which was done. George set about 50 while I set perhaps 25. The grounds did not look good to me and the only evidence I could find was that of Peromyscus, an animal about which I cared very little. The traps were set at the base of the sand dunes just above the high water mark near the tide flats. The call of Wilson Plovers was heard as we were wandering around with the lantern and we determined to try a last fling at them when picking up the traps in the morning.

Thursday, May 27, 1926

We were out at daylight this morning, getting in the traps. While I gathered up my line, George was busy with his and Pierce, with my 410, shot three Wilson Plovers and several Marsh Sparrows.

Reaching the boat, we all had our breakfast. The anchor was drawn in and we set sail, passing over the bar about 9 AM. The passage was much rougher going out than it had been coming in, although it was not uncomfortable.

Royal Terns were in abundance near the mouth of the Lagoon and many Pelicans and Western Gulls were present.

We then settled down to a monotonous sea journey, that lasted until 3:30 that afternoon, when we dropped anchor in Santa Rosalia Bay. Baneroff and his two assistants went ashore to explore the region, while George and I stayed on the ship to work until trap-setting time.

A large stone corral and a small shack marked the only human occupancy of the region, although, from a bird and animal standpoint, it looked to be quite a profitable collecting locality. Back of the beach line numerous yucca trees were seen on the rising slope which, after a few hundred yards of steep incline, reached a lava-capped mesa. Several canyons were observed cutting through this mesa toward the sea, and they appeared to contain a good chaparral of brush and cactus, although I did not have the opportunity of exploring them.

Pierce reported, upon his return to the ship, the following birds: Horned Larks, enertia, Ravens, Ospreys, Desert Thrasher, Hearn's Thrashers, Snowy Plover, Western Gull and Costa Hummingbird. He brought me an adult male Black-tailed Gnatcatcher which he had shot.

About 5:30 George and I were taken ashore and our entire strings of traps were set. We put them out in such a way that they could be picked up easily at midnight with the aid of a lantern. While I was setting the traps I saw two Desert Thrashers and two Shrikes.

Returning to the ship I put in a hard evening's work, skinning, and Pierce was good enough to sit up with me, waiting until time to pick up the traps. We rowed to shore about 10:30 with the lantern and picked up the traps, which contained an abundant catch. Chief among the interesting species was a nice series of Perognathus arenarius, which I was most anxious to secure. It took over an hour and a half to gather in the traps and, upon our return to the sea shore we were dumbfounded to find our skiff fully 400 feet from the water's edge. This was most distressing for me, as Mr. Pierce, being a semi-invalid, was hardly capable of helping me drag the boat to the water. After an hour's hard work, I was finally successful in getting the skiff into the surf. No time was lost in getting to my bunk.

Friday, May 28, 1926

We set sail soon after midnight, bound for Ensenada, our next stop. Morning found us riding a quiet sea. It was not until late afternoon that we passed San Geronimo Island.

Saturday, May 29, 1926

After an all-night's run, we sighted Punta Banta about 9 this morning and an hour later Captain Seeley was in Ensenada, getting his clearance papers. The town was full of tourists who had come down from the States to spend Decoration holiday and at least a dozen yachts were anchored in the harbor.



They

After the papers were made out we set sail for Todos Santos Islands, where we spent the afternoon exploring the north island of this group. Gulls were in abundance and Belding Marsh Sparrows were not uncommon, but the large Pelican and Cormorant rookeries that had formerly been here were not found, nor were there any signs of their having been present this season. A few Cormorants were roosting on the north side of the island and they flushed at our approach. The Gulls seemed rather irregular, too, in their nesting for, while they were all paired off and grouped about on the island on their prospective nesting sites, there were very few eggs. We were short of food for the few live birds that Baneroff had captured for the Zoo, so an hour was spent cruising through the kelp catching fish and I enjoyed the only sport of the entire trip during this hour, when I hauled in several Kelp Bass and I made the best of it.

Getting to our old anchorage on the east side of the south island, George and I went to shore with our trap sacks. As this is the type locality of Peromyscus m. dubius and Neotoma intermediata anthonyi, we set our traps so they could be picked up again at midnight by the use of a gas lantern. This trip George stayed up and, about 10 o'clock, succeeded in getting a tremendous catch, as almost every trap set contained an animal of some sort, either Peromyscus or Wood Rat.

We then set sail for an all-night run, with the Coronado Islands as our destination for the next day.

Sunday, May 30, 1926

We dropped anchor about 6 this morning in a cove on the South Island of the Coronado group and, after breakfast, George and I put to shore on a hurrelet egg hunting expedition. Baneroff, with his two men, went over on the west side of

the island, in search of a Duck Hawk's nest. They spent several hours after it, returning about 10:30 with three half-grown young and with but four sets of Murrelet eggs. George and I had had better success and, between us, we had seventeen sets of two, several singles and four or five birds. Murrelets were certainly abundant this year on South Island, more abundant than I have ever seen them and practically every cranny that was suitable for a Murrelet nest contained a bird and eggs.

We then pulled anchor and stopped at Little Middle Island. Here photographs were made of the whole crowd and Bancroft and I went over to the cave in search of the egg found on May 17. His bird had returned and laid another egg, while the singles that I had spotted in the cave were still singles, with an old bird incubating one of them.

As I was returning to the boat, in the familiar crevice I found another Murrelet incubating two nice eggs.

We were all pretty tired and, being close to San Diego, decided not to waste more time. We set sail on the last lap of our journey about 2:30. Arriving at the quarantine station, we were inspected by the doctor in charge and also met by Mrs. Bancroft and a party of her friends in a fast launch. They were not allowed to come aboard our ship until after the customs had been passed, but kept alongside calling back and forth.

We reached the Municipal Pier about 5:30 and were passed by the Customs Inspectors without further trouble.

*Huey / Corona do Jun 26*

Thursday, June 10, 1926

As the guests of Dr. Van Wart, Wright H. Pierce of Claremont, Mr. Jones, botanist of Pomona College, and myself set sail at 4:30 this morning, aboard D. Van Wart's small yacht, "Loafer," bound for a day's trip to the Coronado Islands. The tide was exceptionally low this morning and the skipper of the boat held his craft too close to the mud, causing us to stop with a jerk near Buoy No. 6. This caused us a delay of about 20 minutes and it was necessary to launch the skiff and carry an anchor out into the deeper water and pull the ship off the mud.

After an uneventful trip, we were landed on the South Island of the Coronados at 8:30. We began an intensive search for Murrelets, but apparently the height of the season had passed, as I found many places where the eggs had recently been hatched. Most interesting, however, was the fact that in one of the holes where a Murrelet set had been taken on May 30, a single fresh egg was located of exactly the same type of egg taken from this hole on the date previous, showing that the bird had returned to this location in another attempt to make her summer home.

We left the island about 11:30, with but very little for our trouble, Pierce and I each having but two sets of eggs. We scanned the Little Middle Island as we passed, but was nothing of interest there. The great rookeries of Cormorants were not present this season, although Gulls were abundant and no doubt nesting.

We arrived at North Coronado Island at 12 sharp, dropping anchor about halfway down on the east side of the island. Lunch was eaten before attempting

Ilucy

to land. A survey from the water of the birds present on this island proved interesting, as there were but very few Farallon Cormorants near the central summit and the large rookeries of Brandt Cormorants that were formerly present on the northeastern cliffs were entirely lacking this season. Gulls were in abundance and I would venture to say that they showed an increase of 200% over their abundance in 1916.

Landing at the old quarry, we searched <sup>two</sup> ~~few~~ hours for Murrelets. I was fortunate in finding two more good sets and an old bird with two small young. Pierce had gone to the top of the island and reported, upon his return, nothing but large quantities of young Gulls that had been recently hatched. The time was so short on this island that I did not have the opportunity of getting to the summit.

As Dr. Van Hart was anxious to get into the harbor before dark, it was necessary for us to start back at 2:30. Just before starting, about a dozen Gulls were shot about the boat and I selected eight of the most perfect ones for specimens.

En route home several Sooty Shearwaters were seen and one or two Black-vented Shearwaters.

We arrived at the Municipal Pier at 5:45 P.M.

Huey/Guad Jun 26

Tuesday, June 22, 1926

We left the dock on board the Eagle Boat 34 at 9 A.M. I was the guest of Dr. Harry H. Wegforth of the San Diego Zoological Society, who had made arrangements with Lieutenant Dort of the Naval Reserves for the use of Eagle Boat 34, commanded by Captain McHulty and Lieutenant Dort as reserve officer. We were bound for Guadalupe Island in quest of Elephant Seals for the Zoological Park. Accompanying us, also as guest of Dr. Wegforth, were several newspaper reporters and the Mexican Consul, Mr. Frias, with his friend, Mr. MacGregor of Mexico City.

The sea was quiet as we left the harbor and passed the whistling buoy. We reached North Coronado Island at 10:50, making the run in record time. Here numbers of Western Gulls followed the ship and were joined at 1 O'clock in the afternoon by a lone Black-footed Albatross. Meanwhile nearly every bird we passed joined the procession. At 3 o'clock a second Albatross joined in and, at this time, there were at least 200 Petrels of probably three varieties -- Black, Socorro and Least. At 3:30 a third Albatross joined the party and they sailed, sometimes within a stone's throw of the ship, so close that I could see their beady eyes. At sunset the Gulls were still with us perching on the cross-tree of the mast and swooping into the wake of the ship to gather up every morsel thrown overboard.

Wednesday, June 23, 1926

We arrived off the island about 3 o'clock in the morning and hove to awaiting daylight. After it was light enough, we ventured in close to the island and finally dropped the anchor when about 1,000 yards offshore. The

crates were lowered and all gear to go ashore was got into the water. Dr. Wegforth, Lieutenant Dort and myself were included in the first load and we were successful in getting through the breakers, although the boat did yawl parallel to the breakers and threatened to capsize several times. In all the excitement, but two members of the party got wet.

Landing on the beach, at the north end of the herd, we found a large male and a smaller animal of undeterminable sex, lying separated from the rest and, as they offered such good possibilities of capture, we immediately corralled the big fellow and he entered the crate with very little difficulty. The collapsible corral was then placed about the smaller animal.

Dr. Wegforth and I then started our count. I climbed to a vantage point above the herd, which was divided into two bunches, the nearer containing 134 animals, while the one further to the south contained 306. These counts were made under a good deal of difficulty and were but approximately right, as the animals were lying in such compact form that it was impossible to separate them.

The beach had changed considerably since our last visit, as the greater part of the sand had been washed away and replaced with round boulders, varying in size from six inches to one foot in diameter. The seals did not seem to like the rocks to rest upon and I believe this feature was the cause of the separated herd.

I had never before, on my two previous visits, seen such an assemblage of large animals. Practically all of them seemed adult and but three small ones were present. These animals I judged to be yearlings.

After the greater part of the seals had been driven to the water, I found four tiny Elephant Seals of about 30 inches in length that had been crushed the old animals. This would indicate that the seals do have their young on this beach and that the young appear at an early season in the year.

Another interesting discovery was a young Murrelet picked up from the sand that had been in the midst of the seal heard. This feature was interesting as it proved two things -- that the Murrelets nest on Guadalupe Island and that the young apparently get to the water by their own efforts. This little fellow had gotten lost in the midst of the seals and, unfortunately, had been rolled on by one of the animals. It had another bearing on our knowledge of Murrelets also, as two birds in the Museum are definitely known to have been four days old and this bird was but half their size. Therefore it was, in all probability, but two days old and on its way to the open sea.

While waiting for sunlight to complete my series of pictures, I found several pellets scattered about on the rocks on the beach line. Examination proved them to be the hair of Elephant Seal's shed skin. Fragments of the skins had been devoured by Gulls; the animal matter had been dissolved by the gastric juices on the birds' stomachs but the hair had been regurgitated.

While I was waiting for light to finish the photography, two Rock Wrens were seen busily searching the nearby rock slides, five Guadalupe Linnets flew past and a Red-tailed Hawk soared overhead. While another member or two of the party and I made pictures, Dr. Wegeforth, with his company of marines which had been detailed to help, succeeded in picking out what they thought were two young females seals and they were successfully loaded in their two remaining crates.

A good deal of difficulty was experienced in getting the crates off the beach, as the drums which were to have been used as floats were impractical and failed to work for the surf would jerk them loose from their stays as fast as they could fasten them on the crates. However, about noon, they were all successfully loaded on the ship and the trouble of getting off the island commenced. There had been three whale boat loads of men brought ashore and the first load to go back had the unfortunate experience of having the boat swamped as they went through the breakers. This necessitated its being bailed out and, with all the sixty men on shore, the frail craft was dragged on the beach and rolled over. The second load had the same difficulty, although I didn't attempt to take my camera on board until the last try, which was successful, and I got aboard the big boat dryshod. The last load to come suffered worst of all for, with but fifteen men, they had to pull the boat on the beach and roll it over, to empty it of the water it had shipped. At this time the whale boat got a severe banging on the rocks, knocking off a portion of the keel and part of its rail and all the caulking from one side of the planks. It took nearly two hours to get the motor sailer and the water-logged whale boat on board the ship and we finally set sail at 3 P>M> to circumnavigate the island. A couple of Western Gulls were seen soaring about over the Elephant Seal beach. They were too far away for a very critical examination but I imagine that this island is not inhabited by Gulls and the Gulls present are those brought here by passing ships. As we sped down the western shore of the island, a couple of pairs of Murrelets flushed from the surface of the water from near the bow and another pair was seen as we rounded the southern point of Guadalupe. These were the only birds seen near the island after leaving the Elephant Seal beach. Our course was set for San Diego as we left the northeast side of the island at 5:45



Bill and sailed into the night through a very rough sea.

Thursday, June 24, 1926

Arising at 6 the first words to reach my ears was the proclamation of "Coronado Islands off the starboard." But gazing at the mentioned island, I failed to recognize the very familiar contours of the Coronados and it was only after some persuasion that I was able to convince several that, in reality, they were Todos Santos Islands and we were bound for Ensenada. This later proved to be the fact and the course was immediately changed to follow coastwise until familiar landmarks could be picked up. Meanwhile, a great many Gulls joined the ship and a few Dark-bodied Shearwaters were seen winging their way over the sea. During the morning's run, but two Petrels were seen in the wake of the boat and I believed both of these to be Blacks. We arrived in port at 11:30, with our seals in good condition. An hour was spent unloading them this time with the aid of the huge dock crane which much simplified matters over our experience at the island.

Notes

Trinidad, Humboldt County

Cabazon, Riverside County

July 12 - Sept 1st 1926

July 14th 1926

In company of Mr. A. B. Howell I left Santa Barbara at 3:30 this afternoon bound for a month at the Trinidad Whaling station in northern California. We camped for the night about 20 miles south of King County after having driven until nearly midnight.

July 15th 1926

Was awakening at the first streak of gray dawn by the call of a yellow-billed Magpie. The bird was perched on top of a nearby telephone pole inspecting the camp.

We arrived in San Francisco about 2 p.m. & immediately took the Sausalito ferry and were on our way. The general aspect of the county changed fast and soon the beautifully paved highway was completely overhung with the interlocked branches of hedge trees.

The day was uncomfortably warm. We reached Ukiah about 7 p.m. where dinner was obtained.

Driving on we camped by the roadside, making a total of 330 miles for the day.

July 16th

Breakfast in Willetts this morning and left paved roads behind us tho the graveled highway was well graded; it was rough & cut our speed.

About ten a.m. we dropped down a short steep grade & saw the first Redwoods. Our course was now more westerly and followed the river. We were soon passing thru large groves of huge redwoods, some of them being over 20 feet in diameter.

Mr. Howell searching about thru the massive trees, found one that had a large cave burned out in its base and on the floor several pieces of small white egg shells & bird droppings were discovered. Obtaining his flashlight we searched thoroughly & found that a nest of Vaux Swifts had been hatched earlier in the season. There was no opening to this side from above as described by other writers and the parent birds had had to descend within 4 ft off the ground to enter.

We arrived in Eureka about 3 p.m. where we had our lunch, then down on to Trinidad, our destination, a distance of 24 miles. We arrived at Trinidad about sundown & finally after some trouble rented a small cabin about a mile from town. We set a short line of traps nearby this evening.

July 17th 1926

We went to the whaling station this morning to look over the ground of our future work. Made the acquaintance of Mr. Detrich, the manager of the plant, who proved to be most hospitable.

We learned that three small steam vessels were being used for the whaling & all the boats were equipped with modern equipment, gun harpoons & bombs.

After the whales are captured they are pumped full of air & lashed alongside with their tails towards the bow of the boats & towed to the station. On arrival the dead animals are moored to buoy & the station crew then takes charge. The whale is then towed to the base of a large slanting chute by means of a powerful steam winch & large rope. At this point they fasten a large steel cable to the flanks of the beast & haul it up the platform into the cutting shed.

The blubber is then removed in four huge slices from head to tail by powerful winches.

Next the head is severed, then the abdominal cavity & all the intestines thru the huge tail muscles are pulled from the vertebrae.

Nothing now remains but the vertebrae which is hauled to the side & pulled to pieces. The blubber goes thru a machine that slices it all into fine pieces, then by an endless belt it goes to the rendering tanks where the oil is taken out by steam heat. The residue is made into fertilizer.

The head, intestines, all bones and blood are made into fertilizer while the large muscles & larger portions of flesh about the head are cooked in pressure cookers for chicken feed.

We set our traps near a trickling rill in the dense redwood forest this evening.

July 18th 1926

Our traps held a good catch this morning & included *Neosorex*, *Sorex p. pacificus*, *Neurotrichus*, *Sorex m. humboldtanus* and *Zapus*.

Much *Aplodontia* sign was seen & plans were made to set for them later.

Saw a Varied Thrush this a.m., was in dense woods near rill.

First Finback whale captured during our stay was brought in this morning. The beast was 53 feet long & the estimated weight was 53 tons. The whalers figure, whales in good condition over 35 feet in length, to weigh a ton per foot in length. We were not down in time to see the animal hauled in nor the first sheet of blubber taken off.

Many visitors were present & most of the women were holding their noses with their handkerchiefs, as truly the place smells vile.

The traps were not reset tonight.

July 19th 1926

Traps did not do so well this morning & held but a couple of shrews.

A 52 ft Finback whale was brought in last night & at 8:30 this morning the large tail muscles & viscera were still steaming with animal heat.

This animal had been feeding on shrimp-like crustaceans about half an inch in length & its stomach contained about 2 barrels of them.

We counted the baleen plates & found 328 rows on one side of the mouth. These strainer plates only occur on the upper side of its mouth and in this whale extended about  $7\frac{1}{2}$  feet along the outer edge on lips. These plates were very short near the front end of the mouth & at the back were about 16 inches in length - being larger towards the outside & shorter towards the place where the tongue should be. The tongue in this species is very rudimentary and indicates that the food is obtained by opening the mouth wide, taking in a large school of small fish or shrimp at the same time, extending the gular pouch. Closing the mouth the gular region is contracted & the food strained from the water by the baleen plates. This operation does not necessarily have to be close to the surface.

July 20th 1926

The traps held but a couple of shrews this morning. A trap I had set in a Mt. Brewer hole held a *Spilogale*.

July 21st 1926

Set several gopher traps this morning & picked up several gophers during the day.

A California Gray Whale was brought in late this afternoon. The animal had been killed near the entrance of Crescent City

Bay and was in company of three others. The school was feeding near the breakers when taken. This species is reputed to be nearly or quite extinct & the taking of this specimen came as a surprise.

The beast was a male & 39 feet in length and a beautiful gray mottled color above and below. A few parasites were found along its sides.

There were no gular creases on this animal & its mouth had a decided downward curve. The rostrum was high & rounded while the front of its mouth was rather sharp. The baleen did not come up to the tip of the mouth but started about 4 inches from the end. Neither was it as heavy nor as long as in the Finbacks.

A very large heavily muscled tongue filled the center of its mouth. This organ is evidently used to divert the water to the baleen plates when the beast is feeding and also indicates its habit of feeding in shallow water where the mouth can only be partially opened - quite different as compared with the deep water feeding Finback.

The blubber on this Calif. Gray was from 5 to 9 inches thick, making them very desirable from the whaler's standpoint. Large chunks 6 to 8 inches in diameter had been gnawed out by sharks. Later in conversation with the captain L. L. Lance, who captured the animal, I was informed that these chunks were one bite for a species of large sharks that inhabits these waters. In fact this shark is the one that attacks and kills the young whales & takes great toll of their numbers.

July 22nd, 1926

A 60 foot Finback was brought in last night & we watched it thru the process of disarticulation this morning, photographing such parts as we wanted for study. In about 3 hours the entire animal was in the cooking vats - bones and all. The stomach contained about 1½ tons of mackerel all about 10 inches in length. The sarcophagus was less than 4 " in diameter & stuffed with fish.

Finbacks are rather pretty animals being light almost white below & bluish black dorsally. Long corrugations extend from the lower jaw to the middle of the belly & are black in color. They remind me very much of the ribs of corduroy cloth. These corrugations are bellows' like in nature and allow the animal to take in a great school of fish, water & all & strain the food out by contraction of this corrugated surface which excludes the water.

We had a pleasant chat with Mr. Fred Detrich, manager of the plant this afternoon & he placed at our disposal this year's records of captured whales. He says that after each season his company gives Dr. Everman a complete tally of whales taken & has done so since 1920.

(copy of list attached - should be easy to read...)

We set all our traps in a gulch north of town. They were placed along the stream course under roots & near the small rill of water.

July 23 1926

My traps held nice bunch of shrews but Bray capped the climax by catching a *Phenacomys albipes*, a very rare *macrotis*. The animal was taken underneath the roots of an underhanging tree in the creek bed & is the 10th specimen in the collections of the world.

I rebaited my traps & set out three mole sets.

July 24th 1926

Bray captured another *Phenacomys* this morning while my line held a half dozen shrews.

Two more Finback whales were brought in this morning & we spent about half the day making photographs & observing the operations about the factory. One of the manager's nephews showed us all thru the place, giving us full details of the operation of the process of each product made from the whales. Oil, of course, is the chief product & is used by Proctor & Gamble Co. in manufacturing their finest soaps. The Standard Oil Co. uses some to fuse with mineral oil for making lubricants. Several grades of oil are made. The 1st grade from the blubber, 2nd from the muscles, 3rd & 4th grades from intestines & bones & is graded according to the condition the whale reaches the station. The fresher the animal the better the grade of oil. Oleo margarine is made from the lowest grades.

The meat is made into chicken feed if brought in in fresh condition. It is boiled in large pressure steam cookers & dried in a large drying cylinder. All the oil is extracted while being boiled.

A double floor under the cutting room floor catches all the extcrement & blood which is boiled down with the intestines & made into fertilizer.

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July 22 - 1926 cont

Date	Species	Set	Length	Wing	Tail	Food
6/1	Swain	♂	61	65		Octopus
6/5	Fulmar	♂	67	60		Sardines
"	Humphal	♀	45	40		Pilchard
6/7	"	♀	39	35		Sardines
6/14	"	♀	37	35		Pilchard
6/15	"	♀	33 1/2	30		"
6/14	"	♂	44	45		"
6/19	Fulmar	♂	56	50		Pilchard
"	"	♀	65	60		Sardines
6/20	"	♀	52	35		Pilchard
"	"	♀	70	70		Embryo 24" Sardines
"	"	♀	64	60		Pilchard
6/21	"	♀	71	65		"
6/26	"	♀	58	51		"
"	"	♀	63	63		"
"	"	♀	70	60		"
"	"	♀	72	70		Embryo 7'6" sardines
7/1	"	♀	58	50		Pilchard
"	"	♀	73	70		"
"	"	♀	53	40		"
7/3	"	♀	60	55		"
7/4	"	♀	67	60		"
"	"	♀	55	47		"
7/5	"	♀	62	60		"
"	"	♀	40	35		Sardines
7/11	Humphal	♀	40	35		"
"	"	♀	39	35		"
7/12	"	♀	35	30		"
"	Fulmar	♀	53	45		Shrimps
7/13	"	♀	63	55		"
7/14	Humphal	♀	35	30		"
7/19	Fulmar	♀	53	45		"

The bones are run thru pressure cookers where all the oil is extracted & the bones, after being dried, are sent to the sugar refineries to be used in refining sugar.

Very little of the whale goes to waste & the terrific odor about the place is caused by the drying of the fertilizer tho the meat cooking does not have such a savory odor and on my first visit to the place I could scarcely enjoy the next few meals but am more used to it now.

(No explanation given for the attached stats)

July 25th 1926

At an early hour this morning we found the Hercules anchored off the plant so I aroused Mr. Detrich from his bed to find whether I could make the promised trip on the boat today. He gave his consent so back to camp I dashed after cameras, bed roll, etc.

Mr. Howell promised to look after my traps & prepare such material as had been captured.

We were introduced to Captain Larre of the Hercules by Mr. Detrich. The Captain proved to be a very likeable chap & had sailed the arctic waters for over 35 years. He is well acquainted with Charlie Brower of Pt. Barrow & with Bent-Beck-Dixon Snow and others that are well known in Natural History circles, so we hit it off in good style.

We got under way about 9:30 bound for Eureka where the ship was to take fuel & have some repairs made.

The day was beautiful, cool & clear & soon after leaving Trinidad I saw my first Gillimot & Calif. Murre in life. Farther out Dark-bodied Shearwaters were not uncommon.

Entering Humboldt Bay 3 Heerman's Gulls were seen with Western Gulls & Calif. Brown Pelicans in greater abundance.

We put in the afternoon doing odd jobs about the vessel & after dinner I had a very pleasant evening with Capt. Larre. He told among other interesting things how the cow whale carries its newly born young. He says that the newly born whale cannot take care of itself & that it is carried by the mother on her forehead held there by suction of her blow "hole". Capt. Larre says "he has several times seen the cow whale come up under the baby & carry it off in this manner."

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Fireback

Speed - fast  
straight corner

9 July 1926  
to 7/22/26

Bats } 10 knots - 8 knots  
run away

90 ft.

{ 57 ft - 1923  
70 - 1926

Fireback

speed - slow

jump - on top water

6 July 1926  
to 7/22/26

{ 22 foot sailing  
9 over 50

Calif Fern

Sulphur Bottom ocean

He also states that the mother whales leave their calves after they are old enough to swim, much in the same manner as a mother deer leaves her young when feeding.

July 26th and 27th 1926

Spent at Eureka awaiting the completion of repairs.

July 28th

We put to sea short-handed at 7 a.m. taking a south-westerly course from the whistling buoy. Towards noon the west wind came up causing a very rough sea. At two-thirty a lone whale was located & we set off in pursuit going very slowly. The animal was about two miles from the ship when first sighted and by its actions was identified as Finback. This conclusion was made because the beast did not "fluke" or show his tail above water when "sounding" or diving deep. We followed it for over two and a half hours not getting closer than 500 feet. Capt. Larre carefully timed the beast every time it sounded & I was surprised at the accuracy with which he could call the next "blow". Capt. later told me that Finbacks were normally diving deep as this animal was, would stay down from 8 to 11 minutes and this one proved no exception for 4 straight dives I timed were 9:40 - 10:05; 9:08 - 10:20.

The animal on becoming aware of our presence ceased coursing on going in a straight line & started "backing", going off to one side or the other. This would throw off our course, sometimes a mile or more & by the time we caught up the whale had had a good blow & was ready for another deep dive in another direction. This made pursuit almost impossible and the chance of capture a matter of remote luck.

Capt. Larre followed this whale until he was sure that the beast was up to such pranks & then he abandoned the chase.

It was getting towards sunset & we were about 40 miles off shore so it was decided to turn back. Just about sunset I was looking at a distant ship thru the field glasses & saw two spouts about two miles to the northward. The ship was headed that way & we were soon on two very tame Finbacks.

The large beasts came within 15 feet of the ship when the exhaust of their breaths sounded like scraping straw & the intake like that of a heavy snore.

All was excitement on board the ship while we jockeyed for a position to shoot. We were not long in this attempt for the beasts rose not twenty feet in front of the ship's bow. Imagine the chagrin when the primer in the gun failed with a sharp click. Three times we had an excellent chance

when darkness prohibited further pursuit and when the ship was headed for port it was carrying a very disgruntled crew, for every one down to the cook "rated" in the kill. We arrived at Trinidad about midnight & I didn't get off the ship

July 29th 1926

I was awakened by the motion of the ship under way this morning and had scarcely made the deck when a heavy blow from the gun proclaimed Capt. Larre tinkering with the weapon with hardly enough light to see. We fired several primers and decided it was ready to load.

As the sun rose Black-footed Albatrosses began gathering & soon we had 8 following the ship. I tried to bait them up with a long string with a chunk of salt pork tied on the end but had no luck. The boys on the ship said they had caught many of these birds by having them swallow a large piece of meat tied on a string & then hauling them on board. About 8 a.m. we were again in the same locality in which we had left the two whales last night & sure enough two spouts were seen. These two Finbacks proved very tame and were undoubtedly the same pair we were working with last night. Approach was easy and the chance for a shot came very soon. Again, the gun clicked and not until the twelfth time did it explode. The projectile did not hit a fatal spot but it did hit a spot just back of the dorsal fin and where it could not pull out. Then the fun began. The huge beast sounded taking out 2000 feet of cable so quick that the winch almost caught on fire. The ship was put on full speed while the winch took in the slack. Back & forth the cable was drawn & withdrawn and for an hour or more no one on board the ship was certain who would win. However, the poor animal thru loss of blood - for with every rise the the sea was red for yards around - began to weaken & he was drawn up close to the ship. So close that the great 12 foot flukes slapped violently against the ship's bow & the whale blew & snorted with its violent attempts to free itself of the torturous projectile. The air pump was now brought into play & a long sharp perforated pipe was stuck into its rectals & soon it was bloated with air and died.

The animal's mate, undoubtedly a cow, left at a 30 mile per hour pace when the shot was fired.

While we were jockeying for positions to shoot I had ample opportunity to observe Finback whales' movements in the water. The propelling motion is made entirely with the down-ward thrust of the flukes while the flippers are used to guide the beasts. From my position high up on the mast & in the crow's nest I could see them at least 200 feet below the

surface of the water & several times saw the flippers give the motion that turned the beast sideways so he could look at the ship over him. At this time the light underparts of the Finback would flash white. The animals did not appear to be very large when well submerged but were enormous when pulled up the deck into the cutting shed.

As soon as the whale was dead a great heavy chain was passed around its tail & securely fastened to a "bitt" near the bow of the ship after this operation all the crew felt safe that the whale would not escape.

While the animal was being pumped up 16 Black-footed Albatrosses sat about on the water, some of them within a few feet of the ship.

It was now 11 o'clock & as we were about 40 miles off shore we headed for port with the kill.

We arrived at Trinidad about 3 p.m. & I left the ship with my outfit.

On arriving at camp I found Bray had put up 31 skins for me during my week's absence. Amongst the lot were two *Phenacomys albipes*, one of the rarest of California mammals. We had a very pleasant hour with Capt. Larre after dinner & got some very interesting data from him in conversation. He said that Humpbacks & Calif. Gray Whales are apt to be found close inshore but never Finbacks. They feed in the deep clear water & are seldom within 20 miles of shore. This same feature holds true of Sperms tho their food is entirely different from that of other whales.

Humpbacks are very slow swimmers and when sounding always show their flukes. It is possible to identify them at a long distance by this habit tho the Calif. Gray shows his flukes at times but they are not elevated to such a vertical position. The feeding habits of the Humpback was interesting & Capt. Larre says that they come up underneath a school of fish, standing on their tail in the water, open their mouths wide & use their very long flippers to scare the fish into their open mouth. The Humpback is the only whale that breaches or jumps out of the water, sometimes clearing the surface 10 feet, when landing after such a leap they always fall on their side or back. This is done to protect the abdominal regions from shock.

The feedin habits of the Calif. Grays is not well known in the Captain's experience tho they much prefer shallow water & even the close proximity of rocky shoals & beaches.

They are the most vicious of all the whales and will attack small boats without any apparent provocation.

The speed of different whales was discussed and Capt. Larre said that usually whales traveled from 3 to 6 miles per hour when not excited or molested, but that Finbacks were capable of a maximum of 30 miles per hour, while Humpbacks & Sperms were not good for more than 18 & that for a short distance only.

The speed of the Finbacks accounts for the lack of parasites on them while the slow old Humpback is sometimes covered with barnacles & other parasites, fish lice, leeches etc.

Cal. Grays can attain a 25 mile per hour speed for short spurts but they too are chunky & have a few parasites. The depth to which a whale can dive was discovered & Larr said that he had a Sperm Whale take out 1500 fathoms (=9000 feet) of line without moving the boat, the animal going straight down. This seems almost incredible -- but considering their food - huge octopuses - they surely have to go very deep for them. The length of time of submergence too was talked of & Sperms stay down from 45 minutes to 1 hour & 45 minutes, then on rising to the surface take a half hour or longer time to blow. Larr says that Finbacks & Humpbacks can go down 250 - 300 fathoms & that he had had Humpbacks break their necks on the bottom at 250 fathoms.

Bray and I talked over the prospects of more pictures of capturing whales & on Mr. Larr's invitation on the morrow. Wrote a few notes & went down to take the ship at midnight, couldn't find a skiff with oars in it so unfurled my blanket & slept or tried to sleep on the dock. I was warm enough but every time I drew a breath I was plumb awake for the wind was blowing directly from the cuttin shed a hundred feet away & the stench was almost unbearable. That is the first time in my life that foul air has even kept me awake!

July 30th 1926

Capt. Larre & his daughter came to the dock at 4:15 a.m. & we all went aboard. The sea was oily smooth & by sunrise we were well off shore.

Wind came up about 10 a.m. & caused a heavy chop - took northward course paralleling the coast at about 40 miles offshore, saw few Black-footed Albatrosses but not nearly as abundant as yesterday. Traveled all day & didn't see a "blow". In late afternoon the sea was running high with decks awash, so put into Crescent City for the night.

Near the small inlets that mark the entrance to the harbor many Murres were seen with their single half-grown young.

As we entered the harbor two black Oystercatchers were seen.

July 31st 1926

Low thick fog enveloped the whole country early this morning but we put to sea nevertheless, blowing a warning fog whistle every minute.

Capt. Larre showed me where he had taken the Calif. Gray Whale several days ago - and indeed it was a dangerous place to work. He had but 16 feet of water & the Hercules draws 13 - when he shot the animal. In fact it was but a few hundred feet offshore & the high water lies just back of the beach. He told me that many autos stopped to see the play.

We came onto a lone Finback about 10 o'clock this morning & worked with it 3 hours without results. In fact the wind had risen so strongly that we had to give it up on account of rough water.

I timed many dives & found them to nearly all range from 8 to 11 minutes. The animal was feeding & was within an area of 1 square mile the whole time.

Put back to Trinidad where we arrived about 4:30. I quit the ship - for good this time as I have wasted a whole week.

August 1st 1926

Bray had a short line of traps set down towards Clam Beach & he gave me the results - 2 shrew & a Microtus.

I set a long line of traps thru the same region this evening. A great abundance of Aplodontia burrows were found on this grass-covered hillside while Microtus runways were everywhere. Saw a Zapus while setting the traps.

August 2nd 1926

Traps held a good catch, 1 Neotrichus, 1 Sorex v. vagrans, 1 Sorex p. pacificus & Microtus o. oregonio, several Microtus & many Peromyscus merriami. I picked up all the traps & reset them up the canyon above town for more Phenacomys albipes this evening.

I placed the traps carefully choosing the most likely sites under overhanging roots near the creek. This seems



to be the only place this rare animal has ever been captured.

August 3rd 1926

My traps held a fair catch this morning but disappointing in not having *P. albus*. 3 *Sorex p. pacificus*, 1 *Neosorex* 1 *Sorex m. humboldtiana*, 1 *Microtus oregoni* & 1 *Eutamias t. townsendi*.

We went down to the Whaling Station & shot 8 Gulls & I spent the rest of the day & until midnight getting them prepared.

August 4th 1926

My traps held several shrews & a single mole this morning. As we had planned to leave this morning I picked them all up & saved only the mole. Left Trinidad at 12:20 bound for Inverness, Marin County where a few days are to be spent collecting.

Spent the evening & night with Harry Wilder at Carlotta and found him to be the same fine congenial host.

August 5th 1926

Mr. Wilder, Bray & I spent a couple of hours collecting tree mice from the fir trees back of Mr. Wilder's house. I climbed a dozen high fir trees & was successful in collecting 1 adult male & 2 young *Phenacomys longicauda*.

This was my first experience with the species. The males & females live in separate nests. The male nests are small, being about the size of a rodent's nest & usually placed well out on the upper limbs of a fir tree. The nest is constructed of fir needles on the outside, lined with the dried ribs of fir needles after the juicy parts have been eaten. Incidentally, this constitutes the food of these mice. The bottom of the nest is an accumulation of dungs for the animals seem to have no sense of sanitation as do woodrats.

The nests of the females are bulky affairs & more often situated near the trunk of the tree. These nests are sometimes 18 inches in diameter & have from 6 to 15 compartments. An occupied nest always has a quantity of freshly picked fir twigs on top. These animals require much food and a large supply is necessary. The amount of nutrition elements in each fir needle is very small & this may account for the size of the store which seems to be placed on the nest for diversal consumption.

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We left Wilder about 2 p.m. and drove thru the avenues of huge Redwoods all afternoon, camped about 11 p.m. 10 miles south of Willets.

August 6th 1926

Made an early start & found a broken spring on the Ford so had to wait around Ukiah a couple of hours while the repair was being made.

Arrived at Inverness about 3 p.m. & found the good camping places all freshly posted with "no camping". However, I hunted up the owner & found a most affable person - Mrs. Hamilton & obtained permission to spend a few days in the restricted camp sites.

Set traps thru the marshy grove of Alders & a marshy place bordering the salt marsh.

Placed two Mole traps near camp.

The place is a beautiful camping site, giant spreading Alders & Calif. Bay trees with a trickling rill of crystal water. Cold as ice. A heavy fog came in at sundown tho it did not precipitate.

August 7th 1926

Was awakened at an early hour this morning by the chatter of Grey Squirrels in the trees overhead. Three of them were quarreling over Bay nuts. Later a very tame Coast Jay inspected everything in camp, even alighting on my back as I was lying in bed.

My traps held several *Microtus c. californicus*, several *Peromyscus m. imbidus*, a single *Sorex vagrans* and a couple of Song Sparrows. Bray had excellent luck, catching 2 species of shrews & a shrew mole. He gave me 3 skins.

During the day my traps caught several more *Microtus*.

I reset most of the traps along a running stream this evening, also 2 mole sets.

August 8th 1926

My traps held but two specimens, 1 shrew & 1 *Microtus*. This was very disappointing after the care I had taken last night in selecting trap sites.

During the day a half dozen traps that had been placed on the border of the salt marsh captured a few *Microtus*.

After breakfast I set a couple of gopher traps in a small meadow and at noontime I found an exceptionally large male gopher held fast in a trap by the skin of his belly. He had evidently been caught some time as a great hole in the ground had been dug by the animal. I then set all the rest of my gopher traps & had a hard job finding fresh holes.

After supper I found two large females dead in the traps.

About 4 this afternoon Bray & I cranked up the Ford & drove out on the road to the Light House. At a point on the western slope of the hills and about 4 miles distance northwest of Inverness a long wet meadow with bunch grass growing waist high was found. In this locality the Berkeley collectors had taken 8 *Zapus t. oriamus* several years ago, they having spent about a month in the region - and in the same locality 6 years ago Bray had taken 2 of these rare animals in the night.

We strung out all our traps, placing them in *Microtus* runways as much as possible.

A heavy cold fog began rolling in before the traps were all set, giving promise of a good wetting on the morrow when the traps are gathered up.

August 9th 1926

A light drizzle had fallen during a greater part of the night and everything was dripping with water this morning.

My traps held 14 *Microtus c. californias*, two shrews & two shrew moles, while Bray caught but 2 *Peromyscus m. rubidus*. Needless to say we both were soaked to the skin gathering up the traps.

The mole traps set day before yesterday still remained unsprung, while the gopher traps held two immatures.

As I was returning to camp I saw a Hind's Chipmunk in a Bay tree & hastily secured the gun. The little animal had not moved while I was getting the gun and I collected it.

The returns were not worth the efforts at the meadow trapping ground so I strung out my traps in several short lines thru the marshy places near camp this evening.

August 10th 1926

My mole traps held a single specimen while the mouse traps held a shrew & 2 *Microtus*.

The catch was so unsatisfactory that after preparing the shrew & mole we packed up & left for Berkely going via San Rafael and ferrying over the bay to Richmond.

We found Dr. Grinnell at the M.V.Z. and spent several pleasant hours, lunching with him at the Faculty Club.

I found my box of Rufous-crowned Sparrows waiting for me & spent an hour comparing them with specimens of *canusculus* and *lambi* in the M.V.Z. collection.

We left Berkeley at 3:15 p.m. bound for Monterey, where we arrived about 10:30 p.m. , too late to set traps.

August 11th 1926

We camped back of the sand dunes north of the Del Monte Hotel grounds. Gopher sign was abundant and I soon had my traps working. During the day 7 specimens were taken.

I set all of my mouse traps at sundown, placing them thru the brush on the sand dunes. Several years ago the Berkeley collectors took a great series of *Dipodomys goldmani* here but very little sign could be found. The place is well settled up with houses on several lots in each block so I hold but slight hopes of a catch tonight. Having a few traps in my sack I placed them along the damp edges of a small tule-bordered lagoon in hopes of catching a shrew or so.

August 12th

My gopher traps held 4 gophers while the mouse traps over the sand dunes held but a single *Peromyscus g. gambeli* and the tule sets held two *Mus. musculus*, both eaten up by water leeches.

We packed up and left at noon bound for Morro, San Luis Obispo Co. where we arrived about 6 p.m.

The area about the small village was not suitable for trapping so we set out to find the locality that Grinnell's party had trapped over several years ago which was near the head of the bay.

We found splendid ground near the Sunnyside School and camped beneath some large Cypress trees on the school grounds.

Our traps were set thru a deserted field just across the road and more *Dipodomys* sign I had never seen before.

I looked my traps over by lantern light at 9:30 this evening and took out an even dozen *Dipos*. Looks like a big day tomorrow.

August 13th 1926

My traps held 16 *Dipodomys merriami* and 10 *Peromyscus m. gambeli*, while Howell caught but 4 *Dipos* & 5 *Peromyscus*.

The day was foggy with a cool wind blowing from the west. About noon the school teacher, Mr. Ensign, asked me to talk to his children about birds, so after lunch I addressed the room of 20 kids. This cost me an hour of valuable time but have to be obliging in this game.

However, I managed to get my skins all up before dark & the traps out again thru the same field region. I looked my traps over by lantern light once about 9 p.m. and again at 10:30 - getting a total of 16 *Dipos* & 4 *Peromyscus* for the trouble. Lost 4 more traps. These Pocket Rats seem unusually strong and even tho caught over the neck can kick off with a trap, getting under a bush or into a hole where they cannot be found.

August 14th

Thick fog drifted in during the night and was condensed by the trees overhead and we were almost drenched. Miserable, to say the least.

My traps held 10 more Pocket Rats & 4 *Peromyscus*.

We viscerated our catch, packed up & left for Santa Barbara about 10 a.m. arriving at our destination at 3:20.

Bray's family awaited his arrival at Mrs. Howell's mother's summer cottage at Montecito.

Bray & I worked until 10:30 getting up our stuff. I didn't get my whole catch prepared so will have to get an early start in the morning as I want to find a camp near Carpenteria tomorrow afternoon.

August 15th

Left Montecito about 2 this afternoon and drove about as near the foothills back of Carpenteria as possible.

Locating some likely looking trapping grounds that offered possible camp sites I turned in. Asking permission & directions at the first house I was surprised to find it to be the residence of Ralph Hoffman. He was not at home so I drove on to the canyon about a quarter of a mile distance to camp.

I strung out my traps over a brush-covered side hill. Animal sign was not abundant thru the brush but along a wood road that waved thru the oaks in the bottom of the canyon I saw *Mephitis spilogale*, coyote, cottontail rabbit, ground squirrel & *Dipodomys* tracks. A very large covey of Quail came into the trees at sundown.

During the night two screech owls were heard calling nearby.

August 16th 1926

My traps held a poor catch, 2 *Dipodomys a. agilis*, 1 *Peromyscus m. gambeli*, 1 *Neotoma i. intermedia* and three of the desired *Perognathus c. dispar*.

I strung out my traps thru the brushy hillside association again this evening. Spent a very pleasant evening with Ralph Hoffman, saw many of the cuts made by Allen Brooks with which Hoffmann is illustrating his latest bird book.

August 17th 1926

My traps held a fair catch, 5 *Perognathus c. dispar*, 2 *Reithrodontomys m. longranda*, several *peromyscus m. gambeli* & 4 *Dipodomys a. agilis*.

At. Mr. Hoffmann's invitation I drove into Santa Barbara & visited the Museum. Managed to talk them out of a nice Fork-tailed Petrel.

The traps (84) were set near the edge of a grain field on the mesa. This location looked very promising.

August 18th

The traps were almost a failure this morning as only 2 *Dipodomys a. agilis* were taken.

After preparing them I packed up & left for Pasadena where I plan to spend a week with comparison material.

Arrived at Mrs. Dickens about 5:30 & found they were all down to their beach house at Balboa.

However, I made myself at home as I have always had the pleasure of doing.

Berkeley 8/10/26    Rufous-crowned Sparrows

Todos Santos birds darken dorsally from either Lambi or canescens.

This same applies to sides and ventral veins - crown less brilliant.

check - middle toe - larger in Lambi

Tarsus appears heavier - Todo Santos birds.

August 26th 1926

Left Pasadena at noon bound for Cabazon, Riverside Co. where 4 or 5 days are to be spent getting a good series of *Dipodomys a. cabezonae*. After a warm journey I arrived at the destination at sundown. Camping space was found beneath a scattered row of Pepper Trees just inside of the Indian Reservation fence, 1 block north of the Post Office.

The traps were set thru the low chaparral north of camp. Animal sign was abundant tho most of it appears to be that of *Perognathus p. bangsi*.

I looked the traps over by lantern light at 9:30 this evening & took out 2 *Dipo. a. cabezonae* & 10 *Perognathus p. bangsi*. So from appearance I won't have many idle hours at this camp!

August 27th

The wind blew violently all night tho this place has a windy reputation I did not realize that such velocity prevailed for such a duration of time.

My traps held 8 *Perognathus p. bangsi*, 1 *Dipo. m. simulans* & 2 more *P. a. cabezonae*. The traps were set again thru the same association.

The past spring had apparently been very propitious growing season for an abundance of dried stems of animals of many species covered the ground. The small mammals were correspondently abundant as is nearly always the case. The inevitable balance of nature.

I again looked over my traps at 9 this evening taking out a dozen *Perognathus*, 2 *p. a. cabezonae* & a *D.m. serialus*.

August 28th 1926

The traps held a *P. a. cabezonae*, 4 *D. m. serialus*, 1 *Peromyscus m. sonoriensis* and 14 *Perognathus p. bangsi*.

*Peromyscus* seem unusually scarce here this season while the *Perognathus* are much the contrary.

Again the traps were set thru the same general locality & were looked at about 4 p.m.

I caught a *Perognathus* by lantern light this evening. This is the first time I have even captured this species by blinding them with a light and it was only by fast nimble



work that the capture was made<sup>as</sup> they are able to move much more rapidly than *Dipodomys* tho they do not make long jumps but dart here and there.

The traps held 10 *Perognathus p. bangsi*, 1 *D.m. sinoalus* & 2 *P. a. cabezonae*.

August 29th 1926

My traps held three more *P. a. cabezonae*, 8 *Perognathus* & 1 *Onychomys t. morongansis* this morning.

The wind sprang up during the night, blowing cold, so cold that I was chilled thru in my bed. I had to give up trying to weigh my specimens this morning as accuracy was out of the question in such a wind! Wind blew violently all day & I worked with my sweater on. One would hardly expect such weather on the desert in August!

Traps set out again in same general locality and again looked over about 9 p.m.

Caught another Pocket Mouse & gave a *Dipo* a good chase. The traps held 14 *Perognathus p. bangsi* and 1 *Peromyscus m. sonoriensis*.

August 30th 1926

Still windy and uncomfortably cool. Traps held 5 *Dipo*, a *cabezonae*, 1 *Peromyscus m. sonoriensis*, 6 *Perognathus p. bangsi* & 2 *Onychomys t. morongensis*.

One of the latter was a beautiful reddish adult female, the first specimen I have ever caught.

One of my traps held a *Perognathus p. bangsi* that had evidently been found by a snake during the night for the animal was covered with shiny saliva and had been moved about 10 feet from where the trap had been set. Evidently the snake could only swallow as far as the trap & finally gave it up in despair.

Traps set thru the same general area again this evening & looked at about 9.p.m. They held 3 *Peromyscus m. sonoriensis*, 9 *Perognathus* & one *Onychomys*.

This is the first time I have ever taken an *Onychomys* out of the traps early in the evening. This species usually come out late like wood rats.

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Notes -

San Pedro Martir route

Sept 20 - Oct 2nd

1926

Oct 7th - Dec 11th 1926

Sierra Juarez

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Sept. 20 1926

In company of R.R. Low & W.G. Kallock I left the Museum at 10:30 bound for a short trip to Sierra San Pedro Martir. We crossed the International Boundary at noon with no trouble or delay. On our way to Ensenada I observed a Glaucous-winged Gull at Rosarito Beach. We arrived at Ensenada about sundown & found comfortable quarters for the night at the Orange Lantern Bungalows.

Sept. 21

Out early this morning, but did not get away from Ensenada until 8 a.m.. The heavily loaded Cadillac bumped on the differential in every chuck hole so travel was slow. The running boards were crowded; on one side we had beds and on the other two 10 gallon cans of gasoline. Saw an Audubon Warbler near the mouth of Los Americas Canyon. At Santo Tomas a 4 gallon keg of Oporto was added at the winery and took the last space available, that beneath the feet of the front seat passenger. A new road has been constructed between Santo Tomas Valley 7 miles before going over the mountains. A small spring of water is located at the foot of the grade where the road leaves Santo Tomas Valley & might make a good collecting station. After the sharp grade up the mountain side the road ran out over a rolling down hill plain and at a point some 7 miles from the summit a nice running stream was found. This place might also make a good collecting station tho it very much resembles the area about Dulzura in San Diego Co. Near here I saw the first migrants of the season - 5 White-crowned Sparrows, 2 leucophrys and another bunch of 6 were seen about, 4 miles n.e. of San Vicente an hour or two later. One very steep grade is found 6 miles north east of San Vicente and probably causes the northbound travelers some trouble.

As we were dropping down San Antonio Canyon near San Antonio del Mar a large coyote was seen at 40 yards distance. Low took a couple of shots at it with buck shot but failed to kill.

We arrived at San Antonio del Mar at 4 p.m., found Mr. and Mrs. Cresiman in their garden picking seeds of Australian salt plant.

Half an hour was spent talking & our plans revised for we had planned on going to Santo Domingo and now as we learned guns were available at San Jose we set out on a direct course.

While at San Antonio del Mar I saw about 20 Large-billed Sparrows p.n. rotundus feeding in the corral.

In the gorge just west of San Telmo where darkness enshrouded us we saw several California Poorwills flush from the road and on the outskirts of the village a grey fox dashed across the road.

Driving on up the valley we made camp about 8:30 several miles east of the last ranch and on the south eastern edge of the wide expanse of level valley land.

Sept 22 1926

Up at an early hour this morning. Fog had enveloped the landscape during the night & everything was damp. Coyotes had been heard during the night & Pocket rat sign was everywhere in the dusty cow trails. We had taken the wrong road in the darkness last night & had to back track a mile and a half before striking the right track.

*Ammospermophilus l. peninsularis* were abundant & many were seen over this flat.

Our road after leaving the valley ran up a narrow canyon and proved extremely steep, several times taxing the Cad to the limit to pull the pitches. On reaching the chaparral belt on the summit of the hills much of the rare *Manzanita appostifolia* was seen.

We arrived at San Jose about 10:30 & found that Mr. Meling was up on the mountains but Mrs. Meling started a man out to secure an outfit for us. They had shot a small wildcat this morning & thrown it away. This I recovered & saved for a specimen.

When after arrival in the river bottom I saw a Sharp-skinned Hawk soaring not high overhead.

In the late afternoon a fellow named Johnson came in & proved to be a most interesting person as he had done the packing for Edmund Heller and told me all about their experience.

We went out quail shooting later & killed a fine bunch of which I saved 8 for specimens. Many Calif. Poorwills were seen after sunset as we were coming in from hunting.

During the evening Horned Owls were heard hooting about in the willows.

Sept 23rd 1926

Busy all morning with my quail. Saw Nuttall Wood-peckers, San Diego Wrens, Green-backed & Lawrence Goldfinches, Linnets, Phainopeplas, Anthony Towhees, Rosario Thrashers, Barn Swallows, Killdeers, San Diego Sparrows, Lutescent Warblers, W. Mockinbirds, Bush-tits, Cassin Kingbirds, Black Phoebes, Say Phoebes, 1 Roadrunner, Bell Sparrows & Brewer Blackbirds while at work.

Went hunting quail again this evening. We have been expecting our burros all evening but they haven't shown up yet. Heard three Screech Owls this evening & tried to get one but no luck. They are probably *O.a. cardonensis*.

Sept. 24th

The burros came in about 9:30 this morning after having been driven half the night. We were very busy for the next two hours getting our goods ready for the trip.

Left Meling ranch at San Jose at 2:15 this afternoon on the first leg of the pack trip. On the way out of the valley I saw many Barn Swallows flying southward and when about three miles from Socorro while resting a Cape Callenett Rufous-crowned Sparrow hopped within 6 feet of me.

we arrived at Socorro after dark & spent the night in the old cabins.

Sept. 25th

While waiting for the burros to be packed this morning a male Brewer Blackbird and a female Dwarf Cowbird came in and hopped all about the camp. We got out a gun but was too late for the birds became frightened & left.

Climbing up the hills east of Socorro the familiar calls of Mt. Quail were heard. Arrived at La Joya & saw large bunch of Mt. Quail at first water. Many Belding Jays, Bush-tits & Anthony Towhees were seen on our way up the Mt. Blue Jays & Calif. Woodpeckers were abundant down the canyon that leads from La Joya to Valledores Creek and a great flock of female Western Tanagers were seen thru the oaks.

When about 1 mile south of La Joya a red tanager was seen in an oak tree near the trail. This bird was more than I could let pass, so stopped the outfit & got out the gun & killed it. It was new to me, maybe a new species to the A.O.U! Mt. Quail abundant all down the canyon & at Valledores creek saw pair of Red-tailed Hawks, 1 Cooper Hawk, several

White-throated Swifts, Bushtits, Townsend Warblers, Black-throated, Grey Warblers, Barn Swallows & a Pacific Horned Owl. Saw the first Townsend Juncos in the next pine-filled valley. Chipmunks were abundant, busily gathering up freshly fallen pine nuts. Several Spotted Towhees seen near stream in this small valley & many Mt. Quail. Arrived at the west lake in La Gulla Meadow about 5 p.m. & saw 2 small bunches of Pintail Ducks. Kallack & Low stalked these but had only one chance shot killing 1 duck for they had been flushed by wild stock & were flying high overhead.

Many Killdeer were about the lakes & on the larger pond to the eastward a small bunch of coots were seen. A fair-sized bunch of ducks (Pintails) were found & I rode around the pond trying to drive them to the boys on the opposite side. This did not work tho a lone Mallard flew over & was shot. A Duck Hawk was seen darting at a bunch of 100 Brewer Blackbirds as they came into the sedge grass to roost. Barn Swallows were seen coursing over the meadow. The pack train that we had out-distanced came in at sun down & we set out for our old camp site 4 miles up the valley. I led them to the spot in spite of the dark dark night. Everyone was tired out from the long ride and but little time was spent preparing supper.

I was disappointed at not being able to get out my traps.

Sept. 26th 1926

I was out at the crack of dawn this morning & found the old camp just as we had left it in June 1923. The old pegs & branches used to rack up the saddles & pitch the tents were as we had left them tho two of that memorable party have been gone forever.

I put my gun together & picked up a few birds, nothing exceptionable. Saw Chipping Sparrows, several ravens, Green-backed Goldfinches, lots of Pinon Jays, tho chipmunks were rather scarce in this part of the mountain.

After breakfast we sent Jose the packer off with a rifle to look up good hunting grounds. He returned in the late afternoon and reported he had killed a fine buck. After catching a burro to pack in the deer he left, Gunless, for Kellock & Low had then taken the rifles & gone on a hunt. Jose returned at sundown & reported seeing a large lion within 60 feet of him - hard luck for he was gunless.

Low had a shot at two large bucks on the south rim of the valley.

I set all my mouse traps thru the country where I had

Sept. 27th 1926

105 traps held a single Dipodomys and it was caught on a flat in the open pine forest. 2 traps were taken by coyotes and must have had mice in them.

Shot a few birds near camp, saw flight of female and immature Western Tanagers & a lot of Green-backed Goldfinches. W. Chipping Sparrows were fairly abundant.

In afternoon I helped skin the deer. We lost most of the meat owing to improper bleeding when killed and neglect in not skinning and quartering it last night.

I picked up nearly all my traps in mid-afternoon. I had expected to have a chipmunk but none were taken. The traps were reset thru the open pine forest & were looked at between 8 & 9 p.m. At this time but a single Dipo. had been taken.

On the way to the traps a lone Dipodomys was surprised in the middle of a large flat around the pines. I gave chase but the animal was too swift & made its escape. It was the swiftest moving Dipo. I have ever seen.

Heard Horned Owls hooting about midnight.

Sept. 28th

105 traps held 1 Dipo & 1 Peromyscus m. gambeli.

Shot couple of chipmunks & walked down stream that runs past camp, saw several Fox Sparrows & shot 1, saw & shot a single White-crowned Sparrow, saw 2 immature Red-tailed Hawks & a Sparrow Hawk.

Heard a Chickaree but was unable to locate it. This animal was barking at one of the Red-tails but the limbs of the pine tree were too dense to catch sight of it.

Saw a dozen Tree Swallows coursing over the tops about all day, evidently attracted by the spoiled venison that we had thrown away yesterday.

Caught six gophers with three traps in about an hour this afternoon. They were all taken from fresh workings in damp ground near the creek.

Mole sign is everywhere but the ground is too dry to successfully trap them. I have had my two traps out continually since my arrival here without results.

I rebaited & changed part of my mouse traps this evening.

~~Reset the line over at 9 p.m. finding 1 Dipo & 1 Peromyscus~~

a Dipo. The identity of both culprit & victim was very plain by their tracks.

Low went hunting this afternoon & had a shot at another buck. He says he hit it but did not kill.

They are planning on moving camp tomorrow morning so this is probably my last night's trapping in La Gulla.

Sept. 29th 1926

My traps didn't have a single specimen this morning when I picked them up tho several traps had been visited after my last night's inspection.

The boys decided to go down the mountain so with some reluctance I packed up.

Low and Jose went over to the scene of last night's shooting in hope of finding the deer but returned about 8 a.m. without finding a trace of the wounded animal.

While the burros were being loaded Low shot a couple of ravens from a small bunch that kept circling over camp. A pair of Red-tailed Hawks kept circling over and eventually one came too close & had several charges of shot sent at it. The bird flew out into the forest severely wounded and could not be found.

We left the old campground at 10:11 this morning. Low & Kellock rode directly to the lake where I planned to meet them to hunt ducks as soon as I had made a slight detour to the other side of the meadow to make a few good pictures.

When getting out in the open meadow I found a great congregation of Western Ravens, thousands of them soaring in spirals over the meadow. A large steer had recently died and was almost a solid mass of maggots and within this dead animal was the attraction for such an assemblage I was unable to determine. Many buzzards were seen circling in their midst but tho a sharp watch was kept no condors were noted.

On my way to the lake I noted a Prairie Falcon perched high in the uppermost branches of a tall dead pine. Riding up within fair range I took a pop at him but failed to make a kill.

Arriving at the lake I found Low & Kellock hidden amid the rocks on the opposite side. A large flock of mixed ducks were near a rocky point so I rode over and was able to get within gun range, dropping two female Pintails as they rose. Baldpates. Green-winged Teals, Mallards



We stayed about the lake an hour or so shooting at the straggling ducks as they came over. While waiting beneath the shelter of a large boulder I heard the rapid approach of swishing wings. Glancing overhead I beheld the lightning like descend of a pair of Golden Eagles from out of the high blue sky. They were after a small flock of Pintail Ducks which were taking for the protection of the lake as fast as their wings would carry them. The ducks were successful in their escape and the eagles received an unsuccessful bombardment at long range.

I dropped two more ducks both of which were female Pintails. A Duck Hawk kept circling about out of gunrange and three species of Swallows were flying abundantly over the surface of the lake - Cliff - Barn & Roughwings.

Vaux and White-throated Swifts were coursing high overhead and a flock of 200 Pipits were seen near the shores of the lake.

Two Least Sandpipers were flushed from the water's edge and a female Dwarf Cowbird was seen on the back of a steer on the meadow.

Audubon Warblers were not uncommon near the corrals on the south side of the lake.

We left La Grulla meadow about 1 p.m. bound for the night's camp somewhere in the vicinity of Valledores Creek.

As we took the trail to the westward the tracks of a large Mt. Lion were seen and they were followed about the dusty trail almost to the summit. As we rode over the summit I saw a Canyon Wren at close range. A large bird flying high up in the sky proved to be our only Condor observed on the trip.

Camp for the night was made at Valledoras Creek alt..... As we rode up to the small grove of pine trees that had been selected for the night's camp 2 Band-tailed Pigeons flushed from a Cascara bush where they were feasting on the ripe berries. Low shot one that later proved to be a female.

Sept. 30th 1926

We made a 9 o'clock start this morning & hunted Mt. Quail all the way up the canyon to La Joya and a total of 15 were killed from 4 large bunches. Belding Jays were abundant and while much evidence in the way of perforated bark on pine trees was found, only a couple of the acorn-storing woodpeckers were seen. They proved so shy that I was unable to get a shot at them. Several Cooper Hawks were seen.

Stopped for lunch at the old Socorro Placer mine.

Rode into San Jose about sundown, tired out. However, this did not relieve me of the preparation of 11 Mt. Quail and I completed the task at 1:30 the next morning.

Oct. 1st 1926

Was up early this morning transferring the loads from the pack boxes to the Cadillac again.

Just after breakfast a young White-winged Dove was seen to alight on the limb of a nearby cottonwood. I collected it and made up the specimen before the other boys were ready for the last of the loading.

We left San Jose about 10 p.m. bound for the duck ponds at the mouth of the San Telmo river. We stopped several times to shoot quail en route and when the destination was reached we had 42 for our next meal.

Kellock dropped his gun on the bottle that contained the last of our wine and with which we intended to cook our quail this evening, bursting it & flooding the car with the beverage. Poor Kelly felt badly over it & received a severe scolding from Low.

At the marsh we found a large bunch of mixed ducks - Mallards, Green- and blue-winged Teals, Bald Pates & Pintails while Pied-billed & Eared Grebes with an abundance of Coots were scattered over the estuaries.

Amongst the small patches of tules that bordered the brackish sloughs Marsh Wren & Yellowthroats were not uncommon while both forms of Longbilled Sparrows & Belding Sparrows were found amongst the Salicornia. Along the beach the usual sea birds were noted. Calif. B. Pelican, Farr. Cormorant, Royal Terns, Huds. Curlews, Goodwits, W. Willets, Snowy Plover, Least & Western Sandpipers. Bell Sparrow were not uncommon amongst the short brush that dotted the hillsides.

A cold brisk western wind was blowing making life miserable so all plans of spending the night were abundant and we pulled out for a more inland place to spend the night about 4 p.m. Arrived at San Antonio del Mar about 5 p.m. & left driving on until 9 p.m. at which time we were on the mesa near the top of the Santo Tomas grade on the new inland route where the night was spent.

Oct. 2nd 1926

We pulled out at 7 this morning with murderous intentions on every bunch of quail. The northwestern sky was heavy with clouds & gave promise of an impending storm. Several bunches of quail were shot into and about 35 birds killed.

The only incident worthy of note was the observation of an Antelope Chipmunk in the upper end of Santo Tomas Valley.

Arrived in Ensenada 11 a.m.. Raining hard, started for Border at 12 noon, driving with chains in heavy mud, had only been raining 3 hrs but roads were in bad condition already. Arrived at Boundary 5 p.m. crossed without trouble.

Home by sundown.

Oct. 7th 1926

In company of Mr. Frank Stephens & Mrs. Canfield I left San Diego at 1 p.m. with two heavily laden Fords bound for a two months trip to Sierra Juarez and other points in Lower California.

We crossed the International boundary at Tecate without trouble at 3:30 and turned eastward on the "Camino Nacional".

Darkness found us 10 miles east of Neji where we made camp near a small spring. A lone Poorwill was seen nearby and collected.

Oct. 8th 1926

The night was very cold and we all felt chilly during the early morning.

Seven o'clock found us on our way, As we were rolling past a farm hundreds of quail were seen and I stopped and shot enough for dinner. A fine large buck deer sprang across the road just in front of my Ford when we drove down into the next canyon.

The entire chaparral over the vast rolling mesa was Red-shank and not until we turned from the highway 28 miles east of Tecate did the pinyon belt come into view.

El Topo was reached about 10:30 and when filling up the canteens, the first mountain birds were noted, Pinyon Jays were abundant and a very tame White-naped Nuthatch came to drink from a basin not over 6 feet from us.

The road up the canyon was in poor shape but we traveled over it without disaster.

Near San Pedro Ranch a Golden Eagle flew over. Many flocks of Pinyon Jays were seen as we sped thru the open forests of Jeffrey pines.

We arrived at Hanson Lagoon about 12 noon and were much surprised to find the lake dry. This upset my plans some as I had hoped to have lots of ducks to eat.

A hunting lodge had been built since I was last here and was inhabited by the keeper who proved to be a rather sociable soul. He directed me to Chester Lamb's camp a mile or so to the westward.

We found Chester busy skinning and he had a nice collection for his three days on the mountain.

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We set up camp about 100 yards north of his camp. Late in the afternoon Mr. Stephens and I set out to look the region over. I carried my mole traps and the shovel while he carried his sack of mouse traps.

The cattle company had turned 25 hogs loose in the meadow where I had captured a mole in 1924 and they had rooted up the entire moist surface where the small pond had been, obliterating all mole sign.

I shot a few birds & returned to camp.

I saw a Sparrow Hawk, 20 Valley Quail and many Calif. Woodpeckers, Cabanis Woodpeckers, White-naped Nuthatches & Chickadees.

Mrs. C. and I cleaned the quail. I then took the offal and made a coyote set in the open valley floor north of camp.

Mr. Stephens set out 54 mouse traps and 9 gopher traps.

Oct. 9th 1926

I slipped down to the small pond near camp before sunrise this morning & shot a large male Mallard. A bunch of Pintail were feeding in the far end of the pond but left when I shot. I then went up to my steel traps & found them missing. Returned to camp for a forked stick to kill the coyote. Returning I started to trail the missing traps. The coyote had led a rather irregular route and then turned straight towards the nearby rocky mountains in a direct line. This did not seem right to me at the time and aroused my suspicions even more when the trail led up a 6 foot vertical bank with hardly a scratch. The trail ended about 50 yards from the top of the bank where I found the two traps intact with the foot of a coyote in each. Evidently the trapped animal had been killed by a mountain lion, dragged off and eaten. Close scrutiny of the ground nearby revealed the bones of the tongue and a small part of the victim's stomach. This was my first experience with a mountain lion taking animals from my traps.

Mr. Stephens caught 3 *Peromyscus t. martirensis*, 1 *Peromyscus m. sonoriensis* & 1 *Peromyscus b. romeleyi* with 54 traps. During the day he caught 6 gophers, Mrs. Canfield shot a pair of Crossbills from the pines near camp.

I shot a bunch of birds including Cabanis Woodpeckers, Calif. Woodpeckers, Chickadees.

Mr. Stephens set out another long line of mouse traps and now has out over 100 mouse traps, 15 rat traps, 5 gopher traps and 2 steel traps. The mouse traps were set up thru the boulders where a heavy stand of manzanita and scrub oak was growing.

At sundown I went over to the pond to look for ducks and saw a single Barn Swallow flying to and fro. I watched for bats but saw only one flying over the tree tops across the meadow.

Oct. 10th 1926

Steel traps all empty this morning. Stephens' 120 traps held 5 *Peromyscus* & 1 *Neotoma*.

I had hurt my ankle last night when gathering wood & could hardly hobble this morning so could do little or no hunting.

Took a shot at a Crossbill in tree over camp but failed to drop the bird. Mr. Stephens moved a number of his traps today, placing them up on the rocky hills above camp. The chaparral consisted of manzanita scrub oak (*Engelmanni*) *ceonathus* & a scattering of Jeffrey & Pinyon pines.

Oct 11th

My foot was slightly better this morning so was able to hunt near camp. Numbers of Bluebirds were present with R.S. Flickers, Chickadees, 2 ravens, Nuthatches, White-naped Nuthatches, Chipping Sparrows, Sparrow Hawk, 2 Sharp-skinned Hawks, 3 <sup>&</sup>Redtails and while at breakfast Mrs. C. saw a Canyon Wren on a dead log nearby. After breakfast Mrs. C. & I went across the valley. She went high upon the rocky ridge while I worked the valley. She saw several Canyon Wrens, Spotted Towhees & Chipmunks.

In the oaks I saw a number of chickadees, White-naped Nuthatches & a single Plain Titmouse. Calif. Woodpeckers were abundant and a single Williamson Sapsucker was seen & collected.

In a small pond I found about 30 Pintail Ducks securing 4. A single Mallard was seen flying away with the bunch.

Mr. S. moved a line of his mouse traps to south side of valley this afternoon, placing them in a chaparral of manzanita & Scrub Oak.

Bats were abundant this evening flying over the small pond. At Lamb's camp I shot a fine large male Hoary Bat.

Oct. 12th 1926

The traps were empty this morning so Mr. S. changed part of them.

We shot a few birds around camp. In early afternoon we all drove down to the old 1924 camp near El Rayo. Fire had burned over the heavy manzanita. The small stream of water was flowing strong and birds were abundant. Fox Sparrows swarmed in the nearby brush & Juncos had congregated from the surrounding country. Hermit Thrushes were plentiful. We shot 25 specimens & left at sundown for camp.

I baited up my steel traps & set another pair near the old corral in the valley.

Heard Horned Owls hooting during the night.

Oct. 13th

Both my steel traps held an animal. The one near camp a fox & the set near the corral held a coyote. Mr. S. had been baiting three steel sets for the past few days & this morning found a fox in one set.

His mouse traps had been strung out on the south side of the valley amongst a manzanitas, ceanothus - scrub oak chaparral with but negative results and while setting them had found a small trickling spring that ran on top of the ground for a distance of 100 feet. Here birds were abundant so we all went over this morning to look the place over & have a short hunt. Indeed, birds were abundant and as we approached the spring a good sized covey of Mt. Quail flushed. Fox Sparrows, Spotted Towhees, White-naped Nuthatches, Calif. Woodpeckers, Cabanis Woodpeckers, Calif. Jays, Pinyon Jays, Calif. Thrashers, W. Blackbirds.

We got a nice bunch including enough Mt. Quail for dinner.

On our way across the meadow a beautiful Ferruginous Rough-legged Hawk was seen as it alighted on a pinnacle of rock in a boulder pile. I stalked it but had only a chance shot as it had in the meanwhile changed position & was roosting in a tree. After shooting twice at the hawk a female Prairie Falcon flew over and was shot at without results.

I reset my steel traps this evening, placing one on either side of the main valley near the spring.

Oct. 14th 1926

My steel traps held another coyote this morning.

While killing the coyote I saw several Calif. Purple Finches & a Plain Titmouse feeding in the meadow. I collected one of the former, a fine male & the latter. While I was busy with the coyote Mrs. C. hunted in a grove of pines & shot another Williamson Sapsucker, a Slender-billed Nuthatch & a Sierra Red-breasted Sapsucker.

Reset the steel traps in the same place this morning & rebaited the other.

Mr. S. reset a bunch of his mouse traps this evening. He has been using about 100 traps but must have lost a dozen at least, mostly by depredation of varmints.

Oct. 15th 1926

My steel traps held another fox this morning & S.'s mouse traps held 3 adult Dipodomys.

Mrs. C and I went hunting over by the spring again. Killed a Canyon Wren as we left camp and another at the spring. Fox Sparrows abundant. Shot several Chipmunks, 4 Calif. Jays, 1 Calif. Thrasher, 1 Bluebird & several Hermit Thrushes, 1 Calif. Purple Finch.

Saw many W. Chipping Sparrows, 3 Pine Siskins and on the way to camp saw the Rough-legged Hawk again. Reset & rebaited my steels this evening.

Oct. 16th

Had a fox in each set this morning & when I got back to camp I found Mr. S. had captured a fox. That made 3 for the day & enough work to keep him busy all day.

A small flock of Crossbills had come to the trees near camp & Mrs. C. shot 3 of them.

Near camp I shot a Pine Siskin and a Plain Tit.

Reset & rebaited my steels this evening.

Oct. 17th

Steel traps held another fox this morning. Returning near camp 5 Crossbills were seen & I shot 2 of them.

Saw Cooper Hawk in pines near camp. 8 Crossbills came into trees about camp at noon. Mrs. C. shot 1 & I failed to score.



Oct. 18th 1926

Traps held coyote this morning. At camp Mrs. C. shot 3 Crossbills from the trees near camp.

Mr. S. still changing his trap line with negative results. Small mammals are scarce but he puts his bait on in the morning & before night half of the traps are baitless.

Went hunting over near the spring again, saw 2 Band-tailed Pigeons flying over. Fox Sparrows are still abundant with lots of Juncos (pontilis), many Hermit Thrushes etc. Specialized on Woodpeckers today as I want to fill in the series. Set the steel traps again this evening, saw a fine large bobcat.

Oct. 19th

Steel traps were empty but had plenty to do at camp with yesterday's stuff.

Rebaited my steel sets this evening & put out an extra set for the bobcat, saw him again as I crossed the meadow.

Oct. 20th

Traps untouched this morning. Saw the wild cat again & got close enough to take 2 chance shots at him at 100 yards distance.

Went hunting about the meadow, saw another Williamson Sapsucker & both Mrs. C. & I had a shot at it.

Birds were not abundant this morning tho the Fox Sparrows were still numerous about the spring. Calif. Purple Finches were not uncommon & are apparently just arriving.

Saw a Bald Eagle circling over camp as I returned from hunting. About 4 p.m. we took our mouse traps & set them in the pinyon belt  $1\frac{1}{2}$  miles east of Laguna Hansen.

Small mammal sign was fairly common tho numerous fox & coyote tracks gave promise of missing traps on the morrow.

I set 95 mouse traps & Stephens 40.

On the way to camp after sunset a Poorwill was seen rise from the nearby road as we passed the western end of the dry lake bed.

Oct. 21st

My mouse traps held 3 Peromyscus b. rowley, 5 Peromyscus g. sonoriensis & 1 Dipodomys. Stephens' held 5 Peromyscus g. sonoriensis & 1 P. b. rowleyi.

I lost 6 traps by foxes and found at least 12 had been urinated on by the varmints.

Saw flock of Bushtits, several Spotted Towhees & shot a Slender-billed Nuthatch.

My three steel traps held a fox & a coyote. The last set made with small traps had been dug out by a coyote.

November 8th 1926

Left San Diego 8 a.m. bound for Laguna Hansen again to take up the interrupted work. We had very light loads in the Fords, a 30 gallon of gasoline being the most bulky & heaviest item. At Tecate the Mexican officials wanted \$ 85.15 Mexican money duties, which I refused to pay so returned to San Diego where formal complaint was made to the Mexican Consul.

Nov. 9th

The entry to Mexico was made thru Tiajuana without inconvenience duty or delay. The Mexican Consul, Mr. Farias, was very nice and gave me another permit, exempting us of all duty & permitting the carrying of guns.

Desiring to see the country between Ojos Negros & Ensenada I took the longer route to Laguna Hansen via Ensenada where I arrived about 2:30 p.m. after taking a lunch & gas break. The journey was uneventful.

The road led eastward into the large hills and when the 1000 foot of altitude was reached, opposite burned manzanita was abundant and proved to be the commonest chaparral. Packers overtook us as we were dropping into the San Rafael Valley and when reaching the valley floor camp was made for the night.

Having no bedding we wrapped in a Ford canvas each and each took a Ford cushion. This proved fairly comfortable but about midnight a chill fell over the valley and I was forced to keep a brisk fire all the rest of the night. Fortunately during the summer the ranch man had been cutting fence posts in the junipers nearby & lots of brushy limbs were close at hand.

Nov. 10th

On the west side the valley was forested with a heavy growth of very large junipers while in the center & towards the east side, near the base of the Sierra Juarez, lots of mesquites were found.

Valley Quail were abundant & several large coveys were seen as the valley was crossed.

On the eastern side several sandy areas were seen that held very promising appearances for the inhabitation of Silky Pocketmice which at this season had began their winter hibernation.

On the rising slope of the western side of the Sierra Juarez a lone Cactus Wren was observed. I gave chase but was unsuccessful. About 2 miles southwest of El Rayo Mr. Sefton's chauffeur & the mechanic were met. They had been successful in finding their way & had repaired the car and were now on their way out via Ensenada.

Arrived at Laguna Hansen Hunting Lodge, repacked the loads & made camp in the same old site. Too tired to set traps this evening.

Nov. 11th 1926

We went hunting over by "chair" spring. Birds were not as abundant as usual. Only a few *Passerella* were about as compared with their abundance two weeks ago. Chipmunks were also fewer as the cold weather seems to be keeping them in their burrows.

After lunch I shouldered my steel traps & made three sets in the meadow  $\frac{1}{2}$  mile north of camp.

The weather was bitter cold with a gale of wind from the north. I also set a short line of mouse traps over a rocky hillside where I hoped to find *Perognathus*.

Nov. 12th 1926

My steel traps held a male fox and the mice traps 1 *Perognathus* & 2 *Peromyscus*.

The north wind of yesterday had swung into the northwest and was driving clouds before it.

A band of Mt. Quail were found and we killed 7. They were a welcome take as this cold weather seems to demand meat in the diet.

Birds were extremely scarce today and but a few Chickadees & Juncos were seen.

By mid-afternoon the wind had risen to a terrific blast and the clouds were tumbling thru the trees drenching everything with moisture. Having a little bait from the quail I set out three more steel sets and got soaking wet for my trouble.

The little sheet iron stove proved a "life saver" and kept the work tent cozy during the storm.

Nov. 13th 1926

Caught another fox this morning. The mouse traps held a single Peromyscus with a broken skull.

Weather still bad tho the clouds had all been blown away. Out hunting today but found birds scarce. A few Solitaires, Bluebirds, Juncos & Chickadees were about tho the usual hordes of Pigmy Nuthatches were entirely missing. Saw 3 Band-tailed Pigeons flying over and a lone Cooper Hawk. Set a line of mouse traps over a rocky slope on the east side of the meadow again this evening.

Nov. 14th 1926

Another fox in traps this morning. It was captured on top of a ridge amid the rocks & where Stephens had caught the Bassariscus. This fox was a female, the first of this sex taken for some time.

My mouse traps held 2 Peromyscus. I rebaited all the 5 steel sets with raven meat this morning.

Birds not common, but out more abundantly than they have been for past three days.

Went to the meadow in late afternoon & made two more steel sets over in the chaparral & one near a trail. Used raven for bait but don't think much of it as it doesn't smell very luscious.

Set about 40 mice traps thru the manzanita for Dipos.

Nov. 15th

Steel traps empty this morning. Raven is poor bait but have nothing else. We hunted all morning & tried to find quail but had no luck.

Mrs. C. shot three Crossbills which proved to be the best birds taken for the day. 8 more were seen but too shy for a shot.

The day quiet & warm so birds were active. Saw 15 Cedar Waxwings, many Robins, Bluebirds, many Juncos. A lone male Phainopepla was shot while eating mistletoe berries in a oak tree.

Mouse traps held 1 Neotoma, 3 Peromyscus.

Set 13 gopher traps in the meadow. Fox Sparrows rare & saw but one & did not get a shot at it.

About 3:30 I went up to the meadow to look over the gopher traps. Found nearly all of them plugged and only 2 small specimens. Don't like Stephens' method of setting gopher traps. The traps cannot be set into the burrow far enough and it was plain to me the reason he was almost a month catching 24 specimens.

While at the gopher traps I saw a bat flying in broad daylight. I was able to get in range & collected it, later identifying it as one of the Myotis group.

I strung out 50 mouse traps thru the rocks and where Redshank was the principal chaparral. There had been a fire over the area about 3 years past and the shrubs had only attained a 3 foot growth. A good variety of animal growth was present with the resulting abundance of rodent sign.

When setting the last of the traps in the dusk after sunset I saw a rabbit hop behind a bush nearby. Shooting with my aux when I thought the animal stopped I was rewarded with a fine brush rabbit, one of the much desired specimens. The altitude of this locality according to Stephens' barometer is 5300.

Nov. 16th

The steel traps on the rocky ridge where Mr. Stephens caught a female Bassariscus and where I caught a fox on the 14th held a male Bassariscus this morning & the set in the rocks near the head of the meadow held a Spileogale. After killing the skunk I found it had one hind foot missing & undoubtedly was the animal Mr. S. bungled & lost sometime ago. 2 of my other steel sets had been disturbed by foxes.

My gopher traps held 3 specimens and the mouse traps held 3 Dipos & 3 Peromyscus.

Saw two more Varied Thrushes & 1 was shot. Few chipmunks out today as there was no wind & the sun was rather warm. Shot mice female near camp.

Saw several Band-tailed pigeons, Fox Sparrows fairly abundant in manzanita. Saw flock of 8 Siskins. Robins abundant feeding on mistletoe berries in company of Bluebirds.

Set line of mouse traps thru rocks this evening. Rebaited all steel traps. Hunted for rabbits about sunset without seeing one. Owl hooting near camp at midnight when going to bed.

Nov. 19th 1926

My mouse traps held 2 *Peromyscus*, 1 was a *P. t. martirensis* & the other was *P. g. gambeli*.

The *Bassariscus* traps were untouched tho one of the rat traps had a chunk of *Bassariscus* hair in it where the animal had gotten too close & sprung the trap.

Saw small bunch of Mt. Quail & picked up 3 for food.

Steel traps on west side of meadow held 2 male foxes.

I did not have time to skin my foxes caught yesterday so today I have 4 & will probably be busy all day long.

In the midafternoon the unsettled weather took a more gloomy aspect & I expect showers before morning.

All my traps are in and hope the weather holds off a couple of days as I have planned to move camp to either Trinidad Valley or Ojos Negros.

Nov. 20th

Spent the day catching up odds & ends, packed up and left middle of afternoon. Spent the night at the Hunting Lodge.

Nov. 21st 1926

Left at 9 a.m. bound for Trinidad Valley.

Coyote, fox & wildcat tracks were abundant in the soft road dust from the time El Rayo was passed until the road dropped down off the Sierra Juarez.

On the sandy slope where the mountains first began to rise from the floor of San Rafael Valley a lone Antelope Ground Squirrel was seen. This locality looked very propitious

The line set day before yesterday in the manzanita was picked up & held but one animal - a Dipodomys.

Day beautifully still & warm with occasional clouds

wafted high overhead. Birds were not abundant - Fox Sparrows rare & in the two mile walk thru the brush saw but two.

Heard bunch of Mt. Quail but turned them down.

In late afternoon the gopher traps held three more specimens. Baited the mouse traps for small varmints on ridge. These two traps had been picked up this morning after being out 3 days without results. Small bunch of Mt. Quail seen in meadow this evening at sundown & two shot for food.

Nov 17th 1926

Steel traps empty this morning. One set had been robbed of bait & the single jump trap set in the chaparral had been dug out by a fox. This was the third morning that this single trap had been turned out without making a catch. I took up a double set of number 1½S & set them out from the jump trap. This may have results for the beast will not be aware of the two new traps.

Mouse traps absolutely untouched. Gopher traps held 3 small gophers. We shot a few common birds. Calif. Purple Finches especially abundant today & Mrs. C. shot a varied thrush. The bird was first noticed near a pool of water in the meadow.

Chipmunks getting very scarce and in the whole morning's hunt only 2 were seen.

This evening I set out my entire sack of mouse traps thru this rocky red-shank association, also set three traps for Neotoma in the rocks.

Nov. 18th 1926

Steel traps on ridge & in rocks empty tho small tracks presumably Bassariscus were about the set.

Two of the other sets that were placed in chaparral near trails each held female foxes. Bait was not taken from small jump trap in chaparral.

Mouse traps held 1 Peromyscus & rat traps untouched.

for Perognathus & would be well worth trying to trap there in the middle of the spring time before the summer heat set in.

The road led south east into a canyon that paralleled the Sierra Juarez's western base and as altitude was gained the road bed became almost too sandy to travel.

The chaparral seemed nearly all Red Shank tho some Chamisal was seen with occasional clumps of Scrub Oak.

Cottonwoods & willows were found growing along the creek bed where conditions permitted.

Occasional small springs were found all the way to the summit. Here the road led out onto the vast Alamo Plain, The chaparral changed and pines & junipers were growing abundantly amid the red shank & scrub oak & sage. The soil was of decomposed granite but the outcropped boulders were not present. However, the distant hills that bordered the plain were dotted with granite boulders. Birds were not common along this plain tho an occasional Spotted Towhee & Belding Jay were seen.

Arrived at Alamo at 2 p.m. The place was a typical broken mining town of a dozen brokendown shacks. About 20 people were living there tho what kept body & soul together seemed a puzzle to me as not one sign of renumeration activity could be seen. Actually, the place seemed so dreary and so desolate as to give one chills. Only the grave yard was kept in repair & the fence & tomb stones had recently been given a coat of white wash.

I was directed to keep to the right hand roads after leaving the town and so about 3 miles out I took a right road that seemed well traveled. Two miles out on this road I decided it to be wrong so turned back & took the next well-traveled turn to the right. This road which kept to the extreme western side of Alamo Plain led afyer 70 miles into a valley filled with huge live oak trees.

The hill slopes on either side were covered with a chaparral of Chamasial & Red Shank with some scrub oak and the valley floor was well clothed with sage. Open grassy parks between the groves of oaks gave pasture to cattle. Thru these open parks a small stream of water was flowing. It came to the surface in the center of this round valley and flowed eastward tho eventually turning westward somewhere on Alamo Plain. Th this season it ran but a quarter of a mile. A small dam of earth had recently been placed in the creek channel & raised the level of the water until it flowed into a small ditch & was used to irrigate a small meadow nearby.



A two roomed adobe house had recently been erected and nearby was an old house in the throes of decay. Tightly strung barbed wire fences & a well built corral marked the place to be a cattle ranch tho no person was living there at present. At the time of our arrival about 3 p.m. the birds were coming to the water for the evening drink & such hordes of birds I have never before had the pleasure of seeing. Belding Jays seemed the most numerous tho Valley Quail gave them a close second. Spotted Towhees, Audubon Warblers, Fox Sparrows, Calif. Woodpeckers, Gamble Sparrows.

The place looked so good that we decided to spend a couple of weeks at least so pitched camp in the shelter of a fine large oak tree near the old barn.

The place looked especially good for rabbits so about sunset I shouldered my gun & went around two small grain fields but had no luck.

Nov 22nd 1926

After getting camp set up we went hunting.

Nearby I saw a small rabbit but failed to get a shot at it. Birds were abundant, Juncos, Sage Sparrows, Thrashers, Brown Towhees, Wrentits & Bushtits were seen in the chaparral & 3 Band-tailed Pigeons were flushed from a large Live Oak where they were feeding on acorns.

Much mammal sign was present. Coons, coyotes & wildcat tracks were abundant & the tracks of two different mountain lions were seen on the trails.

After lunch I wrote a letter to Mr. Abbott & drove back to Alamo to mail it & leave word at the village of my whereabouts as I am expecting either Mr. Abbott or Mr. Sefton to be coming down this way and wish to find me.

Near Alamo I saw a Shrike perched on top of a juniper but the bird was too wild to get a shot at. When returning to camp a fine large wildcat was seen hunting gophers in the grain field.

Nov 23rd 1926

The day was cold & windy but fortunately an abundant kill of birds had been made yesterday. Early this morning a Merriam Chipmunk was shot from a rock near camp & while at lunch another was taken. Set a pair of coyote traps this evening.

Saw a lot of Robins, 1 Killdeer & one each of Say & Black Phoebe near camp this evening.

Nov 24th 1926

Traps held a fine large male coyote this morning so was busy til noon.

Took heavy cold today & was feeling rather poorly & could rarely keep going at night fall.

Nov 25th

Feeling better this morning and as this was Thanksgiving day we went on a big game hunt. Took three shots at the pet rabbit near camp but missed. I felt pretty blue at the blunder as rabbits promise to be hard to get in this heavy brush. Saw 2 deer (does) in oak grove below camp. We picked up a bunch of good birds & saw San Diego Wrens but they were too wild to get within range. Ran into a bunch of about 1000 Quail, never in my life did I ever see so many in one flock; picked up 22 for dinner & went back to camp.

Mrs. C. shot a Canyon Wren & a Horned Owl.

In spite of the distance from civilization we had a fine dinner, for I immediately cleaned the quail & helped prepare the meal by frying the game.

Thanksgiving Dinner  
Campo Alamo  
22 quail fried in Port Wine  
String Beans - asparagus style  
Giblet Gravy  
Water Cress Salad  
Plum Pudding  
Hard Wine Sauce  
Tea - Port Wine.

Reset the coyote trap this evening & made two more steel sets - one in the brush near a trail & one in rocks.

Nov. 26th

My old set held a coon while the trail set had been disturbed by coyotes and the rock sets were never touched.

Saw a Red-breasted Sapsucker this morning but poor aux shell spoiled the taking of the specimen.

While I was out of camp 3 condors came to a rock pile nearby. Saw two Pigeon Hawks & a Prairie Falcon. Another Band-tailed Pigeon, 1 Mourning Dove, several Flickers, 3 deer. About sundown a beautiful Varied Thrush was seen feeding with robins near camp. I shot at it but missed. Worked until midnight.

Nov. 27th 1926

Dawn broke with heavy clouds overlaying the entire landscape and a drizzling rain fell intermittently all day.

My steel traps were untouched. Set gopher traps & caught 7 specimens during the day. In evening we shot 11 Bushtits near camp.

Nov. 28th

Day beautifully clear with no wind. Heavy frost with frozen ground early in morning.

Trap in brush & one near camp each held coyote. Gopher traps held three more specimens, rat traps in rocks held Wood rat. Went rabbit hunting after sun had dried up the dew. Worked very hard beating thru brush & over rocks for 4 hrs. & killed but 1 rabbit. Mrs. C. saw two but unable to get shot at them. Sharp-shinned Hawks more abundant since rain & two were shot.

Did not have time to reset my two coyote traps this evening but reset the traps on the rocky ridge that had been disturbed & robbed. Made 1 new double set in creek bottom using 2 #4 vectors.

Shot Red-breasted Sapsucker but specimens lodged in thick branches high up in huge Live Oak & I was unable to get it.

Nov 29th 1926

Steel set in creek untouched. Set in rocks caught Neotoma & some unidentified varmint had eaten all but the paw in the traps. Must have been either Bassariscus or small skunk as no tracks were seen in the coarse gravel which would not take the print of a small animal's foot.

Returning to camp saw flock of over 200 Band-tailed Pigeons.

Gopher trap held single gopher. Now have 16 so picked them up. Saw flock - 10 S.D. Red-winged Blackbirds, 25 Brewer Blackbirds seen nearly every day on meadow. Lawrence Goldfinches & Gambel Sparrows suddenly abundant, must have just arrived.

With Mrs. C.'s help I shot three bush rabbits today, found them in clumps of dead brush in the sage. If I get anything out of these rabbits it will have been justly earned by hard work. Saw a beautiful Ferruginous Rough-legged Hawk fly past, but was too far away for a shot.

About 3:30 this afternoon we tried rabbit hunting again but found that it is necessary to have midday light to see them. We did pick up a nice mess of quail for food, however.

Set the two traps again that had captured coyotes on the 28th. I now have 4 sets running.

Set 25 mouse traps thru the sage brush for *Dipodomys*. Mrs. C. saw one out hopping around just after sunset this evening, in fact the sun was still shining on the hill tops.

Nov 30th 1926

Mouse traps held 2 *Dipodomys* & 1 *Peromyscus m. sonoriensis*. Trap in the creek held a vicious female coyote, had a terrible time killing it. As there were no bushes nearby for the animal to get tangled up in so it could snarl & leap at me with 7 feet of chain to work with.

Trap near trail held small female wild cat. A dead *Dipodomys* nearby had undoubtedly just been caught by the cat, before the cat found the trap, and was dropped to enable the feline to pick up a more abundant and tasty meal. However, it was not the case.

My traps on the rocky ridge again disturbed, this time a single toe bone remained in the trap and a few black hair, looked like small skunk but uncertain about the identity.

Saw another chipmunk running over rocks near the trap but did not get a shot at it.

On way back to camp shot a rabbit with my aux, again the animal was in dead brush.

Saw Nuttall Woodpeckers near spring & missed a rabbit while watching for a chance to shoot at the bird in the top of an oak.

About noon drove Ford down meadow 2 miles to hunt rabbit & get load of store wood. Saw 2 rabbits, shot at but missed. Country badly burned over by recent fire & poor hunting.

In evening set another pair of small traps in the rocks & reset the other rock set.

Reset the trap where cat was caught, rebaiting mouse traps set 5 more, total 30.

Up until midnight getting up skins

Dec 1st 1926

My 30 mice traps held 3 *Dipodomys*. Steel traps undisturbed. Spent the morning getting caught up with a thousand details that if left soon made hopeless tasks.

While at lunch about 25 Cedar Waxwings came into a nearby oak. After lunch we went rabbit hunting & spent the entire afternoon at it. I shot 2 rabbits & shot at two more. All of them were found in a clump of fallen dead brush. Mrs. C. killed a beautiful Red-breasted Sapsucker in a small grove of live oak. Saw adult Golden Eagle flying over camp.

As we were returning to camp at sundown 2 horsemen rode into the ranch. One of them later proved to be the owner & did not seem pleased at our presence but I invited him to dinner & he softened up very nicely. I found that the ranch is called Rancho San Pablo & the creek is the headwaters of one branch of San Vicente River. The man also informed me that Real de Castillo was the headwaters of Guadalupe River - Alamo- of Santo Tomas & Valle de la Trinidad - was headwaters of Arroyo Eco or Callonett.

Rebaited my mouse traps at 11:30 tonight after finishing the day's work.

Dec 2nd 1926

Dawn broke with an overcast sky that gave promise of rain before the day was over. Steel traps all empty tho the two sets on the rocky ridge had been robbed of bait. One set had caught a Blue Jay during the day & the bird had been eaten from the trap.

Spent 4 hours hunting rabbits getting one. It was shot in a pile of dead brush near a woodrat's nest. Saw one other but missed it on a chance shot.

About 4 this afternoon I set a line of 80 traps for *Dipodomys*. The greater part of them were set thru sage brush.

Looked at them between 9 & 10 p.m. & took out 15 *Dipodomys* & 1 *Peromyscus m. sonoriensis*.

No rain fell during the day tho but little was seen of the sun.

Dec 3rd

The overcast sky was more threatening than ever this morning & I expected rain to commence falling before I could get in my traps.

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Saw a Turkey Vulture early this morning. It was flying downwind evidently hunting for the pile of carcasses I had out in the field.

My mouse traps held a total of 18 *Dipos* & 2 *Peromyscus m. sonoriensis* this morning making a great catch for the night.

The steel traps on the trail held another wild cat and one of the rocky ridge sets held a fox. Evidently the fox has been responsible for some of the bait robbing during the past.

Rain commenced falling as I started back to camp & fell intermittently all day.

Dec 4th 1926

Rained all day long and I felt thankful many times that my tent equipment was the best that money could buy. The little stove also played its part keeping the large work tent warm & comfortable. Fortunately I had a good stock of kangaroo rats to work on & kept busy all day long.

Dec 5th

Dawn broke with a partially clouded sky & tho the sun tried had to break through the rain commenced again intermittently.

Cleared about noon & I started out to hunt. On inspecting the steel traps I found a coyote in the set back of camp. This set two nights ago had been disturbed by cattle & one of the two traps had been sprung & dragged, the other remained with the dried half-rotten bait trampled over by stock. The coyote had evidently been in the trap 36 hours or more as a great area of brush had been torn up by the beast.

It proved to be a male and was of the smaller species. There is no doubt in my mind that two species of coyote exist in this region but it will take a lot of work to determine their status.

The traps in the rocks were untouched. On my way to visit them I shot a fine Red-breasted Sapsucker. Went to the oak grove south of camp after lunch, shot mess of quail & few specimens. Saw small bunch of Mt. Bluebirds on meadow.

Reset traps on trail west of camp. Saw Phoebe seen roosting on Black Phoebe's nest on outside of old adobe near camp & was flushed shortly after sunset. Looked at the nest about 8:30 with flashlight & found the Phoebe perched on the edge of the nest. It did not flush when strong flash was shined on it.

Dec 6th 1926

A dense fog enveloped the landscape this morning drenching everything with moisture.

After breakfast I went over my steel traps & found them untouched. Took long hunt thru the chaparral after rabbits saw two but did not have shot at them. Brush was dripping with moisture & made hunting very poor. Shot several Sage Sparrows and a couple of Spotted Towhees. Gambel Sparrows were abundant in the chaparral & the Thrashers were singing like the commencement of spring.

I had lots of work in camp as the coyote was a yet unskinned & a lot of birds killed yesterday had not been prepared.

I planned to hunt in the afternoon but the weather prevented as by two p.m. rain was falling & did so intermittently until I retired at 11:30 p.m.

At about 11:15 I went out to remove a string of wet skulls that I had hung on a nail within 2 feet of the old Phoebe's nest on the adobe house. The Say Phoebe was on her roost & did not flush in spite of my close approach & the brilliant gasoline lantern that I carried.

Dec 7th 1926

Rained all day long and I was unable to leave the camp to look at my steel traps. Saw the Say Phoebe go to her roost on the old Black Phoebe's nest at 4:32 this evening.

Dec 8th

Rained considerably during the night but cleared before daylight & turned cold. At dawn the sky was almost clear & everything sheathed with ice.

A brisk south wind cleared the sky & the sun was out for two hours & the clouds enveloped the landscape again & soon rain was falling. We both went hunting during the sunny hours. On inspecting my steel traps I found a coyote in the set near the trail. A fox was in one rocky hill set and a fine Black Red-tailed Hawk in the other.

Birds were out enjoying the few sunny hours. I saw & shot at two Bewick Wrens without result. Killed a rabbit & saw 2 others. Mrs. C. shot 2 rabbits and a Golden-crowned Sparrow which was the only unusual bird taken today.

Set a pair of large traps in a manzanita bush near a trail in a grove of large oaks.

Saw the Says Phoebe perched on the comb of the adobe house at 4 this evening in a drenching rain. Looked for it on its usual roosting place about 5 & found it missing. At 10:30 I went out with the gas lantern during a lull in the rain and found the Phoebe had sought a warmer roost on a ledge or niche in the adobe wall close under the eaves & a few inches above the nest. It did not fly when I held the lantern up within a yard. Just blinked its eyes.

Rained from sundown until 10:30 this evening.

Dec 9th 1926

The path of incessant rain kept me awake the greater part of the night and with the dawn there was no abatement in the downpour.

We did not leave our tents until 3 p.m. when the rain ceased long enough for me to run down & look at my steel set in the oak grove. I found it undisturbed.

During this lull in the rain storm circumspection of the surrounding country disclosed the fact that all the higher hills were blanketed with snow.

While I was busy skinning my fox taken yesterday Mrs. Canfield saw a Cottontail Rabbit near camp & calling me to help me collect the animal.

The Say Phoebe came to its roost at 4:42 this evening. Finding me standing in the doorway skinning the fox the bird took refuge on the comb of the house & did not return to the roost until early twilight. At this time the "seeing" was still good for human eyes but the poor bird had to fairly grope its way to the roost & tried several places along the wall before finding the roosting nest. Evidently their sight is not keen in the darkening hours of the day.

Dec 10th 1926

Dawn brought an overcast sky & showers all thru the day. My steel set in the oaks untouched.

Set in rocks on hill held Spilogale. On killing the animal I found it had a front leg missing & but recently removed, evidently this same animal had been in the traps before.



Dec 10th 1926

We went hunting today. Brush very wet but collected few birds & 3 rabbits. Many Golden-crowned Sparrows about. Fox Sparrows few. The quail which had been so abundant entirely missing. Ruby-crowned Kinglets abundant.

Horned Owls hooting at 11:15 this evening when I went to bed.

Dec 11th 1926

Clear sky at sunrise this morning but clouded over heavily by noon.

Spent the day packing up as we leave for San Diego at earliest possible chance when the weather permits.

Took two shots at Ferruginous Roughleg & saw large bobcat in meadow at noon today. Saw small flock Cedar Waxwings & a single Mourning Dove.

Went quail shooting this afternoon. Saw great flocks of Calif. Purple Finches, many Green-backed Goldfinches, Golden-crowned & Gambel Sparrows.

Fox Sparrows were more numerous today than they have been for past week.

Sky clear by sundown but heavily clouded in the south by bed time. So everything was battened down for more rain.

Notes 1927

April 7th - April 22nd cruise to San Ignacio and  
San Roque Island, Baja Calif., Mexico

June 8th - July 25th  
Valle de la Trinidad, Baja Calif., Mexico

October 7th - 11th Perris, Riverside Co., Calif.

April 7th 1927

Left Marine Construction Co.'s dock at 10 p.m. aboard the "MeCham" as a guest of Capt. O. M. Seeley, arrived at Ensenada the following morning at 7:45 a.m.

April 8th 1927

Left Ensenada 11 a.m. bound for San Ignacio Lagoon, heavy seas and was soon feeling badly, did not respond to mess calls at noon or evening.

April 9th

Dawn found us between San Martin and Cedros Islands well out to sea, the mainland of the peninsula barely visible. Passed north end of Cedros about 3 p.m.. ship Heston passed us at the point and stayed in sight until almost midnight. No birds of interest sighted on trip so far. Numbers of Western Gulls, B.V. Shearwaters, Calif. B. Pelicans and a single Glaucous-winged Gull seen when passing Cerdor.

April 10th

Dawn was breaking as we came into San Roque Bay, coast very desolate with but very sparse growth of small shrubs, looks fairly good for small mammals. Picked up skiff for the two fellows Bancroft is sending to San Ignacio Lagoon, then went to San Roque Is. where Ed. Sechrist, Paul Bussy and I spent 2½ hours searching the island for birds.

When crossing the bay numbers of Pacific Loons were seen on their northward migration. This was the first of the species seen.

On San Roque Is. we found 1 pair Frazier Oystercatchers. Many Brandt Cormorants, Western Gulls & the flat places were perforated with the burrows of Cassins' Auklets. \*\* Ed Sechrist saw 5 Horned Larks and Paul shot a Black Turnstone. 1 Pair of ravens were seen. A small colony of Brandt Cormorants were incubating eggs on a slightly inclined slope. The birds all flushed when we were yet a long ways off and before our arrival the gulls had cleaned up all the eggs.

This island is about 3/4 mile long & not over 150 feet elevation at its highest point, very desolate.

Embarking we ran about half an hour & stopped at Ascencion Island. This place also was extremely desolate & had but recently been inhabited by lobster fishermen.

\*\* I dug out several burrows & collected the adult birds, most of them had young.

Tho the season now being over they had pulled up all their traps & left. Auklet burrows were everywhere while a large colony of Calif. Brown Pelicans were nesting on the protected slopes of the higher part of the island. A pair of Duck Hawks had 2 downy young in a cave near the top of the island. Western Gulls were abundant and were at this season standing about the island slopes in pairs. Brandt Cormorants were abundant tho but little evidence was seen of their nesting. One small colony on extreme western end of the island. Ed found an Osprey with 3 beautiful eggs.

Many Black Turnstones & two Tattlers were seen along the rocky shores. 1 pair of Fraziers' Oystercatchers were seen. Several Turkey Vultures were seen flying about the island, no doubt attracted by the refuse from the camp.

Hundreds of sea lions (Zalophus) were on the western side of the island and their barking was almost deafening at times.

Left Ascencion Island at 11; a.m. bound for Alveojas Point where we plan to spend the night. The coast all along looked bleak & desolate with just a sparce growth of brush. We arrived off Alveojas Point and dropped anchor at 6 p.m. with only the protection from the bleak northwest wind of a small jutting reef. As we were slowing up for the anchorage a lone Parasitic Jaeger flew past.

April 11th 1927

The boat rolled and pitched all night but we managed to get a fair rest. The alarm sounded at 3 a.m. and the anchor was raised. We were but 2 hours from the entrance of San Ignacio Lagoon and as it was necessary to make the bay on high tide we were making the 6 a.m. flood tide. Dawn was breaking as we reached the bay and it was thrilling to say the least to see huge breakers with curling, snarling tops rolling on either side of the ship. Capt. Seeley knew exactly how to handle the situation however, and we got thru without even a drop of water over the rail of the ship.

A large flock of Royal Terns flew past as we entered the lagoon and an occasional Western Gull was seen.

After half an hours's run over the smooth protected waters of the bay we anchored off a large island where Bussey and Selchrist were to spend the next three weeks. A fair-sized flock of Black Brant rose from the water as they took their first load ashore and a lone Glaucuous-winged Gull flew over and alighted on the water near the ship, looking for a handout.

As the shore party's equipment was being unloaded several Red-breasted Mergansers, a lone Rufflehead and a few Lesser Scaup Ducks were seen. When the unloading was completed, Mr. Seeley, Al, Ad and I went ashore to inspect a slough for fish and shoot a few birds.

Miriads of shore birds were present, Least Western Red-backed Sandpipers, Willets, Marbled Godwits, Hudsonian and Long-billed Curlews, Dowitchers, Wilson Plovers, Sanderlings and a lone White Ibis.

The marshes were of the tule like reeds with great areas of mangroves. In the latter swamps I was intensely interested as I had never seen this tropical growth, tho after half an hour's work in retrieving a rail I had had enough, for such an impenetrable tangle I had never before encountered. Marsh Sparrows were abundant and in the mangroves I found the Mangrove Warbler. This was also the first time I had ever seen this beautiful bird alive. By all four of us keeping in a row as we walked along we managed to flush 4 Rails the first one of which I missed to my thorough disgust. Reddish Egrets, Frazier Green Herons, Louisiana Herons were fairly common and three American Redheads were seen. Several Trukey Vultures and a lone Osprey.

none

An ornithological observation that was of tremendous interest to me was a large outcropping of fossils over half a mile long on the shore of the island and when the day was over I returned to the spot with a hammer and a flashlight and collected a small sack full.

In the sand near a large slough many coyote tracks were found and to my amazement the tracks of a lone raccoon. This animal would unquestionably be new to science if a specimen or two could be captured.

After lunch we all went west from the anchorage in the large motorskiff to explore another slough for fish. Lots of herons were seen including Yellow & Black-crowned, Night Herons, Louisiana and Reddish Egrets and American Egrets. In the great mangrove swamps the Mangrove Warblers were seen and amid the marsh grasses many Marsh Sparrows were found. Three Rails were flushed and secured.

Birds shot today - 1 Frazier Green Heron, 1 Reddish Egret, 3 Yellow-crowned Night Herons, 4 Clapper Rails, 3 Mangrove Warblers, 10 Marsh Sparrows.

April 12th 1927

Went ashore after breakfast this morning and invited Sechrist and Bussey to accompany us on a visit to Whale Islands. These islands lie well up towards the end of San Ignacio Lagoon and were about 8 miles from our present anchorage. While ashore I saw lots of *Peromyscus* tracks about the boy's camp and not a great distance from their camp on the beach a coyote had been during the night.

Two Calif. Gray Whales were seen spouting a mile or so from the boat as we lay at anchor and about a dozen of these large pelagic mammals with their calves were seen up near the islands.

On our way up a few Surf Scooters were seen.

The two islands called Whale Islands proved to be of little interest ornithologically and only 1 pair of Mockingbirds, 1 single Shrike & a half dozen Horned Larks were the only land birds seen. Several giant cactuses were present with a small patch of Garrumballa. Several thickets of freesia which was the attraction for the Mockingbirds and several fair sized patches of now dried up annual vegetation. Iceplant was present in large areas.

As we landed 5 Ruddy Turnstones flew from a small rocky reef and a large number of common shore birds were seen, Willets, Dowitchers, Godwits, Black-bellied Plover (8), Red-backed & Western Sandpipers (abundant), Hudsonian Curlew (abundant), a lone Calif. Gull was seen & Buzzy shot a single Caspian Tern that was flying past.

We left Whale Islands at noon and after putting the two boys off at their camp put to sea. At their camp a fair-sized flock of Black Brant were seen.

Crossing the bay always seems to carry a thrill and it was such today for the west wind was blowing briskly making the rollers capped white as they broke all around the ship. Spray flew fast, whitening everything above deck as we passed between the two rows of breaking combers. On the ocean just outside we found a large flock of Royal Terns fishing in company of a few pelicans and Black-vented Shearwaters.

Spent the night at the anchorage below Alveojos Point.

April 13th 1927

Up at 4 a.m. this morning and were soon on our way to Pond Lagoon, our objective, where we wished to cross the bay on the high tide and before the wind came up.

We arrived off the entrance about 7 a.m. and were soon going thru the thrills of having huge combers breaking on either side of the boat. Capt. Seeley had never been in this lagoon before so the sounding line was used to feel the way thru the channel. This channel was very narrow and not long so we were soon in protected waters.

The skiffs were soon over side and we went prospecting for fish. The ocean side is bordered with bleak vegetationless sand dunes while the mainland side is of large salt marshy areas. The vegetation was reed like salt water growth with great mangrove swamps. this marks the most northern limit of mangroves on the peninsula and it was with keen interest that I started out to investigate the bird life.

A lone coyote ran along the beach as we set forth in the motor skiff. Schools of Mullet were seen and the usual number of large Sting Rays.

Black-crowned Night Herons, Louisiana Herons, American Egret (1), Belted Kingfishers (2), Frazier Green Herons (2) and a lone Clapper Rail flushed & was shot as we passed thru the slough. A recently abundant camp was found about half way down the lagoon. As we passed the mangroves I saw a Mangrove Warbler flit up in the air, Flycatcher fashion after an insect, thus establishing their most northern limit.

A large Pipit was seen in the sand dunes on the ocean side of the lagoon.

Great flocks of shore birds were seen along the shores and two shots obtained a fine mess of Godwits for the larder. Willets, Hudsn. Curlew, Red-backed and Western Sandpipers were present. Red-breasted Mergansers, Lesser Scaups, few Pintails, small bunch Canvass-backs and many Surfscooters were seen.

A hole was located that seemed to be teeming with fish and Mr. Seeley and his assistants went back to the ship for a small net to "drag the hole". I stayed ashore to hunt & had a wonderful time. During their absence I collected 6 more Clapper Rails, 4 Frazier Green Herons, 3 Louisiana Herons, 1 Reddish Egret, 10 Passerculus and a single Mangrove Warbler. One more of the latter species was observed but was not collected. Rails seemed very common but were found only near the mangrove swamps. Their flushing habit seemed unusual to me as our Rails about San Diego seldom rise in flight.

About 3 p.m. the men came in with their net and we all tried to haul the hole but owing to an extremely luxuriant growth of water growth the enterprise proved a failure and

we could not pull out the net. The rest of the afternoon was spent exploring the lagoon tho we did not go very far up the main stream. Wind was bitter cold when we turned to return to the ship at sundown. All birds shot today were marked by a piece of string on the legs.

April 14th 1927

We made an early start this morning, loading all the nets & gear, including the small skiff, onto the motor skiff, for it was the day's objective to explore the upper reaches of the lagoon.

After traveling about  $3\frac{1}{2}$  miles we came to the end of the mangroves and found nothing but the reed like grass & Salicornia. Shore birds were thick, and a great flock of Lesser Scaup Ducks were seen. Red-breasted Mergansers were not uncommon. 1 American Egret and 4 Brewsters Egrets were seen on this level sand flat. While a few Western Gulls, Royal Terns and a single Caspian were seen. A lone Eared Grebe was in the fishing hole when we put in the net and seemed much distressed when we commenced to haul. However, the failure to pull in the net let the bird escape. Many more were seen in the deeper water of the lagoon.

This most south eastern eend of the lagoon lies just inshore from Alveojos Point and no doubt was the spot R.C. McGregor received the type of *Passuculus rostratus*.

The fishing holes we were searching for did not contain fish so after reaching the end of the lagoon we turned about and stopped at a point about half way back to the ship.

Many turtles were seen as we passed along. After some consideration the nets were strung across a narrow place in the main stream and we hauled in 24 turtles of which 5 were saved for food.

Many Mullet were jumping and after the net was again in the small skiff we made another haul, securing about 200 pounds of fish, avery poor return the effort extended. While they were placing the net I went hunting & secured 1 more Rail (saw another), 1 Frazier Green Heron and 6 *Passuculus*. Both the Rails seen today were flushed from the marsh near the mangroves.

Had turtle steak for dinner & was a most delectable meat.

The birds shot today were marked with 2 pieces of string on their legs.



April 15th 1927

We found a fine slough near the ship this morning and blocked it with a net at high tide. In this way all the fish that were feeding far up amongst the small tributaries were kept in and as the tide lowered they sought refuge in the deeper holes. Then when the tide was lowest these holes were easily syphoned out. After blocking the mouth of the slough we followed the slough as far up as the motor skiff would run. I saw several Mangrove Warblers perched on the tip-top of dead stems that projected above the green bushes. The male birds were all in full song which did not sound unlike that of our Yellow Warblers tho it was only of short duration. The song was of good volume tho not so loud as *Dendroica austeria* and carried with a rising inflection rather than the roll of the Yellow. Their alarm chirp is quite sharp and audible even in a brisk wind. These birds seem to have a combination of Warbler habits and search about thru the mangroves for food much as our Dusky Warblers in Southern California search rose bushes for aphids. They also flit upward for passing insects as do the Audubon Warblers, tho this is not a regular habit. I watched several birds catch food in this way and each time they returned to the same perch from which they started.

Returning to the fishing ground after lunch I saw a very peculiar performance. A lone Marbled Godwit had waded into the water to the limit of his legs on a sand bar and was feeding on the bottom, running its long bill down into the mud so deep that only about 1/3 of its body was above water. In this position the tail was pointed directly to the zenith. The bird did this trick a dozen times while we all watched & had a good laugh at the peculiar position. In fact the bird looked like a duck when it was standing head down in the water. Another sight that brought forth peals of laughter was when a Long-billed Curlew was seen jabbing its beak full length into the mud and upon drawing out the beak would seem to smack its "lips" with satisfaction. The bill was at least 7 inches long and the bird would run it into the mud clear to its very eyes with ease and agility.

During the day I picked up 5 Rails, 5 Green Herons and 1 Sparrow. These have both feet tied together with thread.

Had a great time fishing but tho the catch seemed large to me as we had but 600 pounds for the great amount of work involved.

April 16th 1927

At high tide this morning we blocked another stream but upon inspection later decided that the effort was for naught so pulled it up and started out to find another stream.

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This we were not fortunate in finding so the day was lost. In the afternoon all of us went on an organized hunt and shot 8 Rails, 2 Green Herons, 1 Louisiana, 1 Yellow-crowned, 2 Mangrove Warblers and 6 Sparrows.

In the evening I put up the Warblers and the 3 that I had killed on San Ignacio as I was afraid that insectivorous birds would not keep.

Saw several Eared Grebes. Have seen them all during the stay in Pond Lagoon.

I shot down a small Rail this afternoon but was unable to find it. The bird looked like a Virginia but I was not absolutely certain. Several American Egrets and a couple of Ravens were seen flying over the marsh.

April 17th 1927

At an early hour this morning it was decided that Pond Lagoon was not a fisherman's paradise so everything was made ready and we put to sea at 8:30 bound for San Ignacio Lagoon again where we hope to scrape up enough fish to at least pay expenses. The life of a fisherman is not an easy one and he has his lean trips only too often.

We went over the bar with ease with the skilled hands of Mr. Seely at the wheel, his trained eye for following a winding channel seems almost uncanny to a lands man. A three hour run over a fairly smooth sea brought us to the far outside of San Ignacio Lagoon. The tide was running out and a west wind blowing stiffly made the trip a decidedly formidable aspect. Breakers were everywhere with curling frothing tops showing green water. The boat pitched and bounced and I reveld in the added excitement. Breakers to an old seaman is like the Indian Warhoop to the old frontiersman and the sudden being of a large rattlesnake to a tenderfoot, it seems to spell destruction. When we were in the channel on the lee with breakers all about even Mr. Seeley, veteran of many years at sea, flushed with excitement as he steadied the vessel for the plunge towards the quieter waters beyon the bar. A huge comber mountain high rose back of the stern and he gave the engine all the throttle it would take to keep in front of the overwhelming mountain of destruction. The wave broke but a few feet astern and never a drop hit the deck.

We dropped anchor near the boy's camp and spent the night at the same anchorage.

A small flock of Black Brant still lingered on the nearby flats.

3 Calif. Gray Whales were spouting about and one large one hit the anchor chain giving us a jar.

I gave Ed 4 mouse traps to set when he went ashore after dinner.

April 18th 1927

We were up early this morning and had the pleasure of watching 5 Calif. Gray Whales spouting nearby. They appeared to be breeding for I saw on three occasions two whales on their sides with their front flippers out of water. This position was not maintained more than 30 seconds. At no time were the flukes above water. There appeared to be 2 adult cows, 1 bull and 2 calves about 18 ft long. At times a couple of these huge mammals would come alongside the ship and I had an excellent view of them. When sounding they never stayed under longer than 1 minute 40 seconds and would sometimes come to the surface and go down again without blowing. I later measured the water & found  $2\frac{1}{4}$  fathoms.

About 7:30 we pulled anchor and went over to the southern part of the lagoon to set our nets. A large slough had been found by Seechrist and Buzzy when they were searching for eggs and was said by them to be "chock full of fish". We found the place and as described seemed to have a great deal of fish. After putting out the block net across the mouth of the slough, we returned to the ship for lunch. Great hordes of shore birds began to accumulate as the receding tide left bare flats. It seemed like the entire world's population for the flocks of Godwits, Red-backed, Western and Least Sandpipers numbered into the thousands. A bunch of 200 Brant swam off in stately retreat as our boat neared them. 9 Bonaparte Gulls were seen on the flats when we returned after lunch.

The tide was not yet low enough to fish so Ed & I went hunting. He went along the bay side of the mangroves while I went down the side nearest the dry land. I found bird life rather scarce & shot 1 Yellow-crowned Night Heron, 1 Frazier Green Heron and a single Sparrow.

Mangrove Warblers were heard singing in several places but were so well concealed in the dense tangle that I was unable ever to catch a fleeting glance. A few Western Willets were seen feeding well up in the smaller sloughs and twice a single bird rose & flew over me twitting the "protest" call as tho I was approaching her nest. Last year at Scammons Lagoon I saw & heard the Long-billed Curlew going thru the mystical flight & song, high up in the air.

The mangroves in the parts thru which I hunted were so tangled that it was impossible to get out of the stream courses. I found no small marshes in which Rails would be feeding so had poor luck. Near the net I shot a pair of Mangrove Warblers and a single Wilson Plover.

Ed had better luck and came in with 3 Rails and a Louisiana Heron.

The tide was now low enough for fishing and we went to work. The first haul with the big net brought in 2½ tons of Mullet and Sea Trout. As the cork lines came close together and the sack in the net was drawn into shallow water the Mullet began to jump out. Excitement ran high as all 4 of us pulled with all our strength to get the net closed. We hauled twice after the first big haul but only caught a few hundred pounds each haul. The fish we had loaded the big skiff to the rails and it was barely able to float. The boys were happy for they now had enough fish to pay them for the trip. It had looked rather bad for a while and they were not certain that the ice cargo in the hold of the ship would hold out long enough.

We arrived at the ship well after dark and fortunately had no wind to buck for our heavily loaded craft would not have withstood even a disturbed surface.

The boys worked until 1 a.m. icing the catch.

April 19th 1927

We pulled anchor and went up to the camp of Sechrist and Buzzy who were prepared to make the return journey with us. After everything was aboard and battened down we put to sea at 10 a.m. with the prospects of a rough bar to cross. Our anticipations were well founded for the stiff west wind had kicked up breakers which were breaking clear across the bar. Capt. Seeley was capable of the situation and the good ship Meham was stuck. After several plunges with water rolling down the decks we made deep water and set our course for San Diego nearly 500 miles away.

The large flock of Royal Terns were again found fishing over the entrance of the lagoon, evidently these birds prefer the ocean for hunting grounds to the more quiet waters of the bay.

The monotony of skiffs at the wheel again came into play to the tune of the even throb of the engine.

The only bird worthy of note seen during the afternoon was a lone Parasitic Jaeger when we were off the entrance of Pond Lagoon.

We arrived at Asuncion Island shortly after sunset and as the bay was rather dangerous to navigate in the dark we dropped anchor and spent the night in the lee of the island.

April 20th 1927

San Roque Asuncion

The engine was started at an early hour this morning and we were off for San Roque Bay to return the skiff borrowed for Sechrist & Buzzy last week.

Passing Asuncion Island great flocks of Farallon Cormorants and Western Gulls were seen. This island marks the southernmost limit of the breeding of the Pacific forms of Western Gulls.

While Mr. Seeley was delivering the skiff Sechrist and I landed on San Roque Island. Western Gulls were abundant and had their nests almost completed. The most unusual find however was the discovery of a colony of breeding Heerman's Gulls. There were about 25 pairs in this small colony and they were just beginning to lay as several of the nests had a single egg. The colony was very compact and did not spread out over an area greater than 75 feet in diameter. I was very much impressed with the peculiar plaintive call of these gulls as they did not seem to have the aggressive raucous call of the Western Gulls.

I shot 7 of their number and 9 Westerns. A bunch of about 25 Horned Larks were seen.

We got under way again and spent the day over a rolling sea watching the desolate shoreline as we passed by. Surely such desert wastes forbid transgression on the part of man and has defied even the inveterate naturalists for half a century.

We arrived at Natividad Island about 4:30 p.m. and decided to spend a couple of hours digging out the nests of Black-vented Shearwaters. Sechrist and I dug almost two hours and received 4 eggs each. I found at least a dozen burrows that held both parent birds. This seems to be a Tule Mice habit and I have found all the species of Petrels that I have experienced collecting, indulging in the same dural habit before the egg is deposited. At least half a dozen of the holes contained a single bird and no eggs. Evidently the season had just commenced.

We left the island at sunset and set our course for home. Our route lay up the eastern shores of Cedros Island, thence across the wide Viscaino Bay with Los Coronados Islands as our next stop 48 hours away.

The waters about Cedros Is. have a very unsavory reputation for rough water and this time was no exception. How the boat pitched and rolled and we put in an extremely uncomfortable night.

April 21st 1927 and  
April 22nd

Arrived at the Mexican Fisheries inspection outpost on the South Los Coronados Island at sunset today after enjoying a pleasant afternoon of smooth sea, the first in two days. After passing inspection we set sail for San Diego where we arrived off Ballast Point awaiting the quarantine and customs inspection on the morrow.

June 8th 1927

The party consisting of Samuel Harter, Mrs. Canfield and myself left San Diego about 9 a.m. bound for Valle de la Trinidad, Lower Calif., Mexico. The 2 Fords were cleared at the U.S. Customs and the gunpermit was placed on file at the border office. Some delay was experienced on the Mexican side and a bonding broker tried to charge \$25. as a fee for the papers but with one permit and some argument we were passed without charges.

Arrived at Ensenada about sundown and spent the night on the outskirts of the town.

Sam helped me set a line of traps. They were strung out thru an area of short chaparral which was bordered on the north by a ripening wheat field and on the west by a bean patch. It was dark when we set the traps so the choice of location was not the best.

June 9th 1927

30 traps held 2 young *Dipodomys* & 2 *Peromyscus m. gambeli*. Left Ensenada about 8:30. Our road ran to the eastward and we were soon in the upper Sonoran chaparral belt where a wonderful display of late spring flowers were at their height. We arrived at Ojos Negros at noon and decided to make camp for a few days.

The site selected was amid the dense growth of junipers on the western side of the valley  $\frac{1}{2}$  mile west of the ranch house. When deciding on a camp site a large juniper was found to harbor the nest of a Western Kingbird, a Mourning Dove and a Wood Rat. The birds both had large young.

After fixing camp we all walked up towards the western hills & in half a mile distance rose above the junipers into the Adenostoma. Valley Quail were abundant, sparrows were not uncommon, Green-backed Goldfinches, Anthony Towhees, Belding Jays, Phainopeplas, Western Mocking Birds, Western Gnat-catchers were not uncommon.

A few Gray Vireos were heard and a pair were found. They acted so queer that half a day was spent searching for a nest. The cause of the birds' anxiety was found to be young just out of the nest. The call of this vireo was a purring trill used by both birds. At times the male would ascend to the uppermost point in the large junipers and sing a short trill. This was not the regular "Mockingbird-like" song but a series of short trills.

A large Texan Night Hawk flushed from a rocky hillside but no nest could be found and a young Red-tailed Hawk just out of the nest was seen.

I set a line of mouse traps thru the junipers this evening. A lone Poorwill was heard calling at bed time.

June 10th 1927

40 traps held 2 *Dipodomys*, 1 *Peromyscus c. insignis* & 14 *Peromyscus m. gambeli*.

A lone Poorwill was seen in camp very early this morning.

As we were preparing our specimens a female Western Martin flew over camp.

A grey Vireo had been heard singing near camp during the morning so after all the birds were prepared, Mrs. Canfield went out to search for it. After half an hour's watch she found and collected the two parents and found the nest which contained four young almost ready to fly. The nest was of the usual Vireo type, swung between two small twigs but like all the nests of Grey Vireos known, it was situated very close to the main trunk of the tree and near the top being about 7 ft up in a small juniper.

In the afternoon Sam & I walked over to the Ojos Negros ranch house for a supply of water.

A small lake of perhaps 3 acres in area lies near the house. On one side of this small lake were several large patches of tules in which a large colony of San Diego Red-winged Blackbirds were nesting. Many Coots and 6 pairs of Cinnamon Teal were present. The ducks were paired and acted as tho they were nesting.

A lone Say Phoebe was seen on the fence near the ranch house. Horned Larks were abundant over the meadows while cliff Swallows coursed overhead.

I set my traps above the juniper belt in the Chamizal.

June 11th 1927

45 traps held 2 *Dipodomys* and 3 *Peromyscus m. gambeli*. On my way back to camp I shot another Grey Vireo.

Set 30 traps near the edge of the small lake. Flushed a female Cinnamon Teal from the grass near the lake. She had eight small young. Old bird circled overhead a couple of times then settled in the water where she went thru the broken wing stunt, quacking loudly all the time.



June 12th 1927

My traps held 1 *Peromyscus m. gambeli* and 1 *Reithrodontomys*. The latter was spoiled by the trap.

A Wilson Snipe flushed near the lake as I passed. I searched for a nest but could not locate it. A flock of 8 Mallard Ducks were seen on the lake. They flushed at long range but wheeled close overhead and I was able to identify them perfectly.

All went hunting this morning and stayed within the junipers. I found a Western Gnatcatcher's nest with five well-feathered young and a Texan Night Hawk with 2 newly hatched young. Mrs. C. shot a Trail Flycatcher & 2 Grey Vireos.

I set traps near the small lake again this evening.

June 13th

35 traps held 1 *Reithrodontomys*. 6 large Mallard Ducks flushed from the lake this morning.

Packed up and moved camp during the middle of the day. This time we settled on the eastern side of the valley and chose the hilltop directly south of the ranch house at Sangre de Cristo.

A fairly heavy chaparral covered the ground and consisted mainly of buckwheat sage, Jojoba or squirrel nut, and squaw tea. Occasional yuccas were present and two species of cactus grew sparingly amid the brush. In the valley near the ranch house mesquites were to be found bordering a springy area of about 3 acres. These mesquites were the largest growth to be found. From camp eastward the ground rose gradually to the western base of the Sierra Juarez which was but 22 miles airline and to the westward it sloped gradually to the valley (San Rafael) floor. The soil was coarse and sandy. Birds were scarce, there being but a few Mocking Birds and Bells Sparrows about the brush. Quail were heard calling but not nearly as abundant as they were in the camp we had just left.

Much mammal sign was present and I anticipate good catches. When first seeing this place in June 1924 I proclaimed it to be a likely place for the small silky *Perognathus* and since that time have looked forward to an opportunity to trap here during the summer. We set our traps out thru the Jojoba association this evening.

After sunset Texan Nighthawks came down from the rocky hills abundantly and their peculiar noises were heard all night long. A pair of Poorwills were also heard and once I thought I saw one rise above the brush in its feeding flight in the bright moonlight.

June 14th 1927

50 traps held 3 *Dipodymus merriami parvis*, 2 *Peromyscus m. gambeli* and 2 *Perognathus panamintinus*. That the latter species was present proved that I had been right in my determinations of 3 years ago.

When carrying water from the ranch this morning an adult Desert Black-throated Sparrow was seen. The bird perched on a squirrel nut bush within 20 feet of me and was closely scrutinized.

The day was a scorcher and from 12:30 until 4:30 during the afternoon we could scarcely stand it. The thermometer reading would have been well above 100 if one had been available for a reading.

Our traps were again set thru the same locality as of the evening previous.

During the twilight I shot a single *Pipistrellis*. Two other larger bats were seen at a distance but did not get within gun range.

The Night Hawks kept up their chattering all night long. I believe this all night revel is due to the full moon which rose just as the sun set this evening.

June 15th 1927

55 traps held 5 *Dipodomys agilis*, 1 *Dipodomys merriami parvus*, 1 *Onychomys horrendus romona*, 4 *Perognathus fallax*, 3 *Peromyscus m. gambeli* and 1 *Peromyscus e. fruticulus*.

Traps were again set thru the Jojoba association. Much gopher work was present thru the brush and two traps were placed in a burrow. Mrs. Canfield caught a young Desert Sparrow.

June 16th

55 traps held 6 *Perognathus fallax*, 4 *Dipodomys agilis semilans*, 1 *Dipodomys m. parvus*, 2 *Peromyscus e. fruticulus* and 1 *Peromyscus m. gambeli*.

Another terrifically hot day but we managed to live thru it by staying in the shadow of our awning tent.

Traps were set over the high ground this evening, association was same as of previous nights. While at the spring after sunset, in fact it was dark, the clear familiar call of a Farallon Rail was heard. The bird kept repeating its call during my 15 minute stay and was heard hereafter I had reached camp.

June 17th 1927

55 traps held 1 *Dipodomys agilis*, 4 *Dipodomys merriami*, 2 *Peromyscus e. fraticulus* and 5 *Perognathus fallax*. The non-appearance in our traps of the desired *Perognathus* is beginning to worry me as they are the sole object of our trip. When two were taken the first night I had visions of at least one each night.

Set traps thru the same association again this evening. Made six gopher sets near camp.

Looked at traps about 9 p.m. and found 3 *Perognathus fallax* and 4 *Dipodomys merriami*, 1 gopher was in the gopher traps.

June 18th

50 traps held 1 *Onychomys*, four *Dipodomys merriami*, 1 *Dipodomys agilis* and 1 gopher. This last specimen had been eating the bait from the mouse traps like any other mouse. Three more gophers were taken from the gopher traps. After a field observation I believe this to be a new species as it differs decidedly from anything I have ever taken before in Lower Calif.

Set mouse traps back thru the same Jojoba association this evening.

June 19th

My traps (55) held 5 *Dipo. agilis*, 4 *Dipo. merriami*, 2 *Peromyscus m. gambeli*, 3 *Perognathus fallax* & 1 *Perognathus b. bangsi*.

During the day I caught a few gophers but found them difficult to trap. There seems to be no surface feeding at this season and as a result all the mounds appear old. This feature causes the animals to have long burrows and a great many are deserted. These gophers have the same habit of filling up old burrows as do other species of this genus that live in the semi arid regions where the soil is coarse & sandy.

In the afternoon we all walked down to an Indian camp and nearby in the mesquites heard Least Vireos singing.

Traps were again placed in the Jojoba association. Saw a Poorwill as we were returning from the traps after sunset.

June 20th

The traps held a single *Perognathus b. bangsi*, 3 *Dipo. agilis*, four *Dipo. merriami* & 3 *Perognathus fallax*.

Worked the gopher traps had all day & caught 3 gophers. In mid-afternoon an Indian cowboy brought me a nice baby Jackrabbit. Set my mouse traps thru the sandy wash  $\frac{1}{2}$  mile east of camp and paralleling the Sierra Juarez road. The place looked especially good for the small silky Perognathus, tho I am beginning to feel pessimistic regarding the capture of a large series of these animals here.

June 21st 1927

My 55 traps held 8 *Dipo. agilis*, two *Perognathus m. gambeli*, 1 *Onychomys* and 1 *Perognathus l. bangsi*.

The gopher traps held a single specimen and were reset with much labor.

The day was a scorcher with hardly a zephyr stirring. I changed my gopher traps again in the evening after finding three specimens had been taken since they were visited after lunch. Set the mice traps back in the same locality that they had been set in last night.

On the way to camp after sunset I shot a single *Myotis*.

June 22nd

52 traps held 1 *Peromyscus m. gambeli*, 3 *Dipodomys merriami*, 6 *Dipodomys agilis*, 4 *Perognathus fallax* and five *Perognathus l. bangsi*. 12 gopher traps held a single gopher. I picked them all up and reset in new burrows.

June 23rd

53 traps held 7 *Dipodomys agilis*, 4 *Dipo. merriami*, 2 *Perognathus l.* and one *Onychomys*.

The gopher traps held 1 gopher badly eaten by ants. I reset all the gopher traps in the alfalfa field near the ranch house of Sangre de Cristo. While looking over the tule marsh for *Microtus* sign I heard the Black Rail song again. This time I was within 25 feet of the bird and the notes were unmistakable. No *Microtus* sign could be found but numerous Harvest Mice indications were found.

In a brush thicket near the alfalfa I saw Least Vireos and Song Sparrows. The day was a scorcher and I am about ready to give up going to Valle de la Trinidad until fall.

I set traps around the marsh this evening, found a single colony of *Microtus*.

Saw 3 Wilson Snipes, several S.D. Song Sparrows and many Tule Yellowthroats.

June 25th 1927

My gopher traps held 2 specimens and so it was decided to pull out for Laguna Hansen. However, Sam came in with a fine large *Microtus* and I decided to stay over & try for a series of these animals.

About 10 this morning we set out all our traps thru a dry tule patch where some *Microtus* and a great deal of Harvest Mouse sign was found.

The day was another hot one. Rebaited the traps at sundown & found two Harvest Mice had been taken.

June 26th

My traps held 5 Harvest Mice and 4 *Microtus*. Rebaited and looked them over twice today with but the capture of 2 Harvest Mice.

June 27th

My traps held a single Harvest Mouse, so we packed up & left for Valle de la Trinidad.

We stopped at the river crossing at San Salvador to fill the canteen. Black Phoebe, Mourning Doves, Black-chinned Hummingbirds and a single Spotted Towhee were seen. Work of Nuttall Woodpeckers was found but none of the birds were seen. Arriving at Alamo we replenished our fuel and chatted with "Shorty" Martin Kenton until about 1:30. He gave us full directions about road conditions leading to the "Valle". Passing eastward from Alamo we were again amid juniper on Larno del Alamo and stayed in this association for about 20 miles. These trees, towards the south end of the plain were the finest specimens I had ever seen, symmetrical & round with a height of perhaps 20 feet. Leaving the junipers we commenced to climb gradually & passed by such plants as yuccas, Desert Willows in the washes while the great heavy chaparral of Red Shank and *Artemesia* clotted the hillsides.

At last we reached the rim of the Valle where the descend from about 3200 feet to 2500 elevation was made in about 1/3 of a mile. Such a hill - steep & rough.

Arrived safely at the bottom to find a belt of junipers surrounding the valley near the base of the foot hills. Below this was the mesquites and below them the valley floor looked bare. Many cattle were scattered over this vast area. The valley must be 6 or 7 miles wide by at least 15 miles long & lies from east to west with a westward drainage. The cattle through this valley belong to a man named A. Newhouse and his ranch house is situated near the western end of the valle where a permanent stream of water flows. Here also the heaviest growth of mesquites occurs. Camp was pitched in this association.

Phainopeplas, Desert Sparrows, Mockingbirds, Cliff Swallows, Cassin Kingbirds, Ash-throated Flycatchers, Western Gnat-catchers were seen as we were pitching camp.

Set all our mouse traps near camp in the mesquite association this evening.

June 28th 1927

My traps held 12 *Dipodomys agilis*, 8 *Peromyscus m. gambeli* and 3 *Onychomys*.

The weather proved a pleasant surprise and was not nearly as hot as we had been enduring. We set our traps back again in the same association.

There seems to be at least 3 species of 5-toed *Dipodomys* here and two of them are, as yet, undescribed. The largest one is of the broad-faced type and resembles *mohavensis* of the Mojave desert while the smaller one is of the extremely narrow-faced type belonging to the *agilis* group but its pelage is as light as that of *merriami*.

June 29th

My traps held 12 *Dipodomys*, 3 *Peromyscus m.* and 12 *Onychomys*. Walked down to the hot springs about 4 p.m. & saw several pairs of Rough-winged Swallows flying about. They were apparently nesting in the banks near the creek.

Set the traps again in the same association as of previous evenings. Saw a Sparrow Hawk fly past this a.m.

June 30th

My traps (52) held 8 *Dipodomys*, 1 *Onychomys* and 1 *Peromyscus m.* and the *Dipos.* were all of the wide-headed type.

About 7 a.m. while skinning mammals the sharp cluck-cluck of a ~~cu~~koo was heard near camp. Loading my gun I carefully worked to a vantage point. The noise was heard again but the bird could not be seen in its hiding place in the maze of branches and so Mrs. C. was sent around with the gun. At this moment the bird ~~xxxx~~ took flight and flew out in such a way that I had a perfect view of it for a distance 25 feet. Flight was very strong, quick and direct. Further search failed to locate the bird.

Traps were set again in the same area as they have been set during the past few nights.

July 1st 1927

49 traps held 8 *Dipodomys*, 3 *Peromyscus m.* and 1 *Onychomys*. In mid afternoon I went down to the creek & followed it down a mile or more. The only thing of interest was the collecting of a lone Western Sandpiper. Saw W. Meadowlarks, Calif. Horned Larks, Killdeer, Rough-winged Swallows, Cassin Kingbirds, San Diego Redwing and Brewer Blackbirds.

I set my line of mouse traps over a rocky cactus-covered hill. A good deal of juniper also was growing over the hills. Shot bats in the twilight.

July 2nd

49 traps held 5 *Dipodomys agilis*, 6 *Peromyscus m.*, 1 *Peromyscus e. fraticulus*, 1 *Onychomys*, 1 *Perognathus fallax* and 1 *Perognathus l. bangsi*.

The capture of the small silky *Perognathus* at this station marks a decided extreme of its range or the possibility of a new race.

About 9:30 this morning the familiar call of a Verdin was heard near camp but the bird was not sighted.

Set my mouse traps in the wash near the locality where the silky *Perognathus* had been caught.

July 3rd 1927

49 traps held 8 *Dipodomys agilis* and 1 *Peromyscus m.* Very disappointing catch.

After breakfast I set 12 gopher traps near the western end of the valley. Meadow Mouse sign was found near a small rill. During the day I caught 14 gophers, all were taken near springs in marshy ground near the western end of the valley. Set 25 traps thru the *Microtus* colony this evening.

July 4th

1 *Microtus* and 1 *Peromyscus m. gambeli* were taken from the traps. 5 gopher traps that had been left out held 2 gophers. Reset the line.

Left the *Microtus* traps out and looked them over about 3 p.m. finding two specimens, 1 had been ruined by the sun. 7 gophers were captured during the day.

Saw numbers of Rough-winged Swallows & 1 Roadrunner near camp. English Sparrows well established here, at least 10 pairs about the corral.

Great heavy cumulus clouds threatened rain during the afternoon but none fell.

Set 30 mice traps along trails that led thru the dry grass under the mesquite near camp. From what I have observed these trails seem to be made by Broad-faced Dipodomys, their habits being much the same as gravipes.

July 5th 1927

My mouse traps held 1 juvenile Dipodomys, a female scarcely out of the nest but the external condition of her sexual organs showed evidence of breeding. This seems to be the case with all Dipodomys. They start breeding as young as they are able to start it. Three Onychomys were taken also. The males of which there were two, had very large testes, showing their breeding season was on. The testes of one mouse weighing 27 grams weighed 2.3 grams.

7 gophers were taken & the traps were reset. Looked them over at sundown & found 7 more had been taken. Reset 5 of the gopher traps. Strung out 40 mouse traps thru the mesquites near camp.

July 6th

My mouse traps held two Dipodomys.

Mrs. Canfield had set out the Schuyler traps yesterday and they were not looked over until this morning. Two Ammospermophilus, 1 Dipodomys and a Woodrat had been caught. The traps were looked over about noon today and 1 Ground Squirrel and 1 Citellus tereticaudus were taken. The latter animal was indeed a very pleasant surprise and is probably undescribed.

Rain fell nearly all afternoon and the only good features of the phenomena was that enough pure water was caught to fill the batteries in the automobiles.

Traps were set for silky Perognathus. The site chosen for the line was amid the junipers near the foothills north of camp. This belt is above the mesquites and seems to grow in rather rocky soil. Considerable "Buckwheat" brush was growing where the line was set. However, the rain this afternoon



did not help trapping conditions and I do not look forward to a heavy catch tonight.

On our way to set the traps the cuckoo was seen again, in fact I saw it twice but was unable to get a shot at it.

July 7th 1927

My traps held 1 *Dipodomys*, 2 *Peromyscus m. gambeli* and 3 *Onychomys*. Mrs. C.'s rat traps held 1 *Dipo* & a fine adult *Neotoma intermedia*. On my way to camp I chanced to see a very tiny young *Ammospermophilus* dart down a hole so set a mouse trap at the entrance. Returning one hour later I found a tiny male had been captured and two others were captured alive in the grass nearby. Evidently something had happened to their mother and they were starved out of their nest. Ants went after them and would no doubt have killed them had not the rescue been affected. Returning again in 10 minutes another baby was picked up. All three were immediately adopted by Mrs. C. who administered canned milk diluted with water. The little fellows responded with hearty appetites.

After lunch Mrs. C. and I drove up to a small spring three miles east of the ranch house and on the north side of the valley. Conditions were vastly different here than they are about camp. Creosote proved to be the most common shrub with Squaw Tea and Catclaw as close seconds. Mesquites were found scattered here & there but were not abundant. A few large yuccas were present. The nearby hills were rocky & several species of cacti were present.

The spring was well fenced and a pipe led to a large cement trough where the range cattle watered. I fished a dead coyote from the spring. The place proved to be such a fine collecting center that I have decided to move up there in spite of the coyote polluted water.

Round-tailed Ground Squirrels and Antelope Chipmunks were abundant. *Dipodomys* sign was everywhere. Doves were abundant and I shot 15 for the larder. On cleaning them a fully developed egg was taken from one bird and two others were in laying condition. None of the number, however, were young birds. These latter birds were taken from bushes out amongst the *Lycenum*, the others were picked off the fence near the spring.

A band of half grown Valley Quail, a couple of Cactus Wrens and a Thrasher were amongst the birds seen. Desert Sparrows were abundant in the arroyos while on the more open ground on the valley floor Calif. Horned Larks were abundant. A couple of young Red-tailed Hawks were seen as we drove back to camp. I set my traps right back in the same flat as I

trapped in last night. The place seemed to be ideally situated for a silky Perognathus and they should be active tonight as the ground is again dry.

Sam set his line on the valley floor where I had seen Dipos. sign last week.

July 8th 1927

My 50 traps held a very poor catch, 3 Dipos, 2 Peromyscus m. and 1 imm. Onychomys.

Mrs. C.'s rat traps held two Dipos. I looked them over at noon & found them empty. Saw fine adult male Scott Oriole in mesquites.

An Indian brought me a nice kit fox this morning. He says they are not uncommon on the valley floor & live in colonies. Sam & I drove up to the spring late in the afternoon & cleaned out the place where the coyote had died. We also dug a new hole & boxed it up. Set traps for Microtis near a small spring this evening.

July 9th

40 traps held 2 Microtus & the traps were left set. Revisited & picked up the traps about 10 a.m., two more Microtus had been taken, 1 of them was spoiled in the sun. The Indian brought me 2 more kit foxes today.

Heard the clear call of a Scott Oriole near camp this afternoon.

Set traps thru low brush in the center of the valley directly south of the ranch house.

July 10th

Traps held 1 Onychomys & 7 Dipodomys. Indian brought in another fox this morning.

Set rat traps for squirrels in the mesquites near a grain field. Caught 2 Round-tails & 3 Calif. Ground Squirrels.

No traps out this evening as tomorrow we pack up and move camp.

July 11th 1927

Packed until too hot & then waited around during the heat of the day until about 3 p.m. when the packing was completed. Arrived at the new camp site at sundown. Set traps nearby.

July 12th 1927

45 traps held 6 *Dipodyms*, 4 *Peromyscus* & 2 *Onychomys*.  
Boy brought in a badger this morning.

Mrs. C. ran the rat trpas for Round-tails & during the day caught 16.

We set our traps back thru the same locality near camp.

July 13th

My 45 traps held 28 *Dipodomys*, 45 *Peromyscus m.* We did not run the squirrel traps today. Heard a Scott Oriole near camp. No traps this evening as we were going after the Round-tails again tomorrow.

July 14th

Worked Round-tails today & captured 18. Shot a Cactus Wren near camp.

About 2 p.m. when setting squirrel traps a Zone-tailed Hawk flew over my head. The bird was so close that its blue beak was plainly visible.

Set traps in the middle of the valley floor this evening. The soil was very sandy.

July 15th

Traps held 4 *Peromyscus m. gambeli*, 6 *Dipodomys* & 11 immature *Perognathus p. bangsi*. Worked the squirrel traps today and caught 20 Roundtails.

Set traps back again in the same general region. Took a snapshot at a Trinidad Crissal Thrasher, but failed to hit. Went down to the hot spring to bathe after dark & saw a Horned Owl as it tried to alight on a post near the spring.

July 16th

My traps were a disappointment this morning, 1 *Dipo. merriami*, 3 *Dipo. a.* - and 4 *Peromyscus*.

Set the rat traps for Antelope Chipmunks, caught 2. Traps were set in the cactus, this seems to be their most chosen habitat.

Saw a fine male Scott Oriole, it was feeding on the bugs in blossoms of the Barrel Cactus. Mrs. C. shot an immature Scott & an adult Thrasher.

Set my traps over the hills where Barrel Cactus was the most prominent growth. I had Sam set his short line thru the sandy area for small *Perognathus*.

The day was a scorcher. Sorry I have not a thermometer for the temperature must have been well over 110° .

Worked the Ammospermophilus traps hard today but did not get a great deal.

Set traps in a wash that ran well up into the Barrel Cactus association.

The floor of the wash was sandy & cat claw, yucca & creosote & several species of cactus were growing. Sam set again thru the sandy area.

July 18th 1927

My traps held 7 Peromyscus m. gambeli & 2 Dipodomys, all were badly eaten by ants. The rat traps had been left set and held a Woodrat & several Dipsos.

Trapped for chipmunks again today but caught mostly Round-tails. Saw the Zone-tailed Hawk again today but it did not come close enough for a shot. The flight of this hawk seemed very unsteady & reminded me of a buzzard.

Sam had captured another Perognathus last night so all the traps were run thru the sandy area this evening.

The day was another scorcher and but little could be done after 9:30. A strong east wind came up during the forenoon & brought San Felipe desert's heat with it, making life miserable. A great bank of clouds filled the eastern sky at sunset, giving promise of a rain.

July 19th 1927

The traps were a failure. I caught the tail of a small Perognathus in my line while Sam had but a couple of Dipsos.

The sky was rapidly becoming overcast at sunrise this morning and by 10 a.m. rain was falling continuing until about 2:30. We packed up & had not the storm settled would have pulled stakes for Laguna Hansen.

Went hunting for game about 4:30, shot about 30 Doves & Quail. Saw lots of Desert Sparrows. several Shrikes, a couple of Cactus Wrens.

July 20th

Up very early this morning, everything wet with dew, but packed & left about 7 a.m. The Fords pulled the steep hill of the the Valle without trouble.

Saw a fine big deer in canyon near San Salvadore north of Alamo. Clouds again overcast the sky and as we reached the higher part of the Sierra rain was falling. This surely felt good in comparison to the weather we had been having for the past month. Spent the night at the lodge.

July 21st 1927

Pitched camp down by the old campsite 1 mile west of the laguna. The whole country seemed fresh & green from the rain yesterday. Birds were not abundant. Violet-green Swallows, W. Martins, Pinyon Jays were fairly common. All went hunting in the afternoon. Sam shot a fine adult male Crossbill. I searched for mole work, shot a few birds but nothing of any exceptional value. House Finches were fairly abundant & were feeding young just out of the nest. Lawrence Goldfinches were also feeding young just from the nests.

July 22nd

Went up to the lake but found only Eared Greebes & Coots. The tules, not having grown sufficiently to entice ducks to return to nest.

Western Kingbirds & Ash-throated Flycatchers were present and several migrating Rufous Hummers were seen. Saw a lone Zone-tailed Hawk & a couple of young Red-tails.

After sundown a Screech Owl was heard near camp. A large rattle snake with 10 rattles was killed by Sam at the tent's door today. Mrs. C. at the time was at her bed in the tent and was severely frightened.

The mole traps set yesterday were unsprung so changed them to another place.

July 23rd

Went out after birds this morning but found nothing of exceptional occurrence. Mole traps unsprung. Killed a huge rattle snake near the mole traps this afternoon.

Crossbills were rather rare as usual but could be heard more often than seen. I saw five today but did not get a shot. The hogs turned loose last fall have begun to increase. Found an old sow with nine newly born pigs. This may be the beginning of a serious nuisance to the wild life of the region.

July 24th 1927

Packed up and left about 1 p.m. As we descended the western slope of the mountains we ran into the water of a tremendous cloudburst that had fallen and drained away less than an hour before, leaving only a wide sandy stream channel where the road had been. This channel was still wet and was packed hard by the flood making an exceptionally fine road.

Arrived in Ensenada about 8:30 tired and hungry.

July 25th 1927

Left Ensenada about 8:30 & arrived in San Diego in mid-afternoon after an uneventful journey.

October 7th 1927

Left San Diego at noon bound for a two weeks trip that will take me to Perris and Palm Springs, Riverside Co. The former locality is on the Pacific slope and the latter in the desert.

Arrived at Perris about 4:30 and made a dry camp about 4 miles southwest of the town near some old mines. A small groves of pepper trees marked the former location of the mine headquarters and camp was established there. The traps were strung out nearby thru a chaparral of white sage and other Upper Sonoran vegetation. A few scattered Calif. junipers were growing and from a tree of this species a flock of about 75 quail (Valley) flushed.

The traps were looked over about 8:30 this evening and in spite of the full moon a fair catch was taken, 1 *Dipo. agilis*, 3 *Dipo. m. parvus*, 2 *Onychomys t. ramonae*, 1 *Peromyscus m. gambeli* and 1 *Peromyscus e. fraticulus*.

Oct. 8th

The traps held 1 new to the list taken last night and added to the numbers, 10 *D. agilis*, 1 *Dipo. stephensi*, 6 *Peromyscus m. gambeli* and 3 *Peromyscus e. fraticulus*. The *D. stephensi* was taken on open ground near the pepper grove. All the traps set in this region were sprung & empty so will replace them with rat traps this evening.

At sundown the mouse traps were all rebaited and six Schuylers set in runways on the open ground near the pepper trees. I had barely returned to camp when a trap was heard and a *D. stephensi* had been captured at 6:03 p.m.

Oct. 9th

The traps held a fair catch this morning, 11 *Dipo. agilis*, 4 *Dipo. stephensi*, 4 *Peromyscus e. fraterculus*, 6 *Peromyscus m. gambeli*, 1 *Neotoma f. macrotus*, 2 *Sylvilagus a. sanctidigi*. The two rabbits had tried to take the bait from the Schuylers and had an awful time kicking the traps into the brush 50 yds. from where the Schuyler trap was lost.

In the late afternoon a Ford car put into the grove for repairs and the driver came over to get a small piece of tire tape from me. Conversation revealed him a most traveled person and of extremely good character. His name is Bill Tomlinson and is well acquainted with Charles Bowker of the Circle Bar Cattle ranch of Lower California. Mr. Tomlinson has spent many years along the west coast of Mexico and talked

at length of his experiences. He seems anxious to again try his luck in those parts and said he would like to join up with a collecting party in that region - a most opportune thing.

Traps were again set thru the same general region & Schuylers set at holes near camp.

Oct 10th 1927

Traps held a good catch this morning, 4 *Dipo. stephensi*, 6 *Dipo. a. agilis*, 1 *Perognathus f. fallax* and 10 each of *Peromyscus m. gambeli* and *Peromyscus e. fraterculus*.

Mrs. C. shot a Sienna-redbreasted Sapsucker from the Eucalyptus Tree nearby. Traps were again set out thru the brush near camp & the Schuylers were set at the mouths of occupied *Dipodomys* burrows near camp.

*D. stephensi* has characters that resemble *D. ingens* in that they live on hard open ground, seldom plug up their burrows and apparently live singly in a scattered colony. These habits seem to be characteristic of all the Broad-faced Kangaroo Rats with which I have had experience.

Shortly after dark this evening I heard a scrambling so went over my rat traps near camp and found a large Cottontail Rabbit kicking around with a trap over his head. An hour later another was taken in the same way.

Oct 11th

Traps held fair catch, 5 *D. stephensi*, 6 *D. a. agilis*, 1 *Onychomys t. ramonae*, 15 *Peromyscus e. fraterculus* and 1 *Perognathus f. fallax*.

I set my traps parallel to the highway through some open ground that appeared to be well suited to *D. stephensi*. Traps held 6 *D. stephensi*, 1 *Perognathus f. fallax*, 2 *Dipo. a. agilis*, 1 *Peromyscus e. fraterculus* & 10 *Peromyscus m. gambeli*.

(End of notebook - no mention of trip to  
Palm Springs.)



January 30 - April 22 1928

San Ignacio, Lower California,

Mexico

January 30 1928

Mrs. C. and I left San Diego with two Fords heavily laden with supplies, bound for San Ignacio, Lower Calif., Mexico, where collecting operations are to be carried on for the next four months.

The U.S. - Mexican customs officials were passed without delay and we were soon on our way. Arrived at Ensenada about 4:30 and found the fan pulley on our Ford was showing trouble so had it fixed. This delay made us so late that we decided to spend the night. Found Samineijo preparing for a trip to the Onyx in company of 6 Mexican geologists.

Jan 31st

We made an 8 a.m. start. About 10 miles south of Ensenada a flock of about 500 tricolored Redwings were seen. Found the route very rough owing to use during rainy periods.

While I was cleaning spark plugs at San Jacinto Mrs. C. shot a Sierra Sapsucker. Several pairs of Red-tailed Hawks were seen along the way.

Arrived at Santo Domingo well after dark, 7:30 p.m. and were received cordially by Miss Hamilton. She has improved her place a great deal since I had seen it last, having erected a square building of eleven rooms built around a very pretty patio. Spent a most comfortable night.

Feb 1st

Was awakened before daybreak this morning by a dozen quarreling Cassin Kingbirds that kept up a continual racket until well after sunrise. Saw a Sierra Sapsucker on the radio pole and a Lutescent Warbler in the trumpet flower vine. While at breakfast Mr. Harkner shot a Zone-tailed Hawk from the Eucalyptus trees near the corral. This bird was given to me for a specimen and was a most agreeable present as it constituted a new record station for the species. Left Santo Domingo about 9:30 a.m. & stopped a couple of hours at Santa Maria to hunt the salt marsh for Belding sparrows. None of these desired birds were obtained but a few Largebills were collected. Resumed the southward journey at 2:30 p.m. Strong cold wind blowing off the sea with heavily overcast sky. Near Socorro another Zone-tailed Hawk was seen perched on the top of a yucca. Gambel Sparrows and Sage Thrashers were abundant all along the way. While driving up the canyon 4 miles north of El Rosario hundreds of Valley Quail were seen.

Arrived at El Rosario just before sunset and wasted an hour trying to buy gasoline - without success. Camped for the night 1 mile east of El Rosario. Night cold & black & cloudy.

February 2nd 1928

We had a few skins to prepare so did not get away until noon today. Driving up Aguaita Canyon the abundance of Gambel Sparrows & Sage Thrashers was again noticed. Camped on the north-east end of Llano San Agustin.

Just at sunrise I fired at 2 quail & picked up eleven, so had a nice addition for the larder.

Feb 3rd

Got underway about 8 this morning and had but little gas in the tanks. Mrs. C.'s car ran out of fuel at San Agustin and lost an hour or more undoing loads to tap the reserve fuel. Arrived at the Onyx about 11 a.m. and found Mr. George Brown, manager of the quarry, a most pleasant person. Spent an hour or so inspecting the works. Filled the cars with gas and water, taking on an extra 5 gallon can for emergency.

Left Onyx at 2 p.m. and traveled south into the unknown, as far as I was concerned. At San Agustin the first Elephant trees were seen on the north slopes of the hills soon after the level San Agustin plain was left. The road seemed hard and in fair condition. After an hour's travel a beautiful forest of Cirios and Giant cactuses was reached. Here a Scott Oriole and several Gilded Flickers were seen. This forest of interesting flora bordered the road until Cataviñito was reached. Here in a rocky canyon the first palms were seen and also were we held up for passports by the Chief Game Inspector. A mile or so farther south Cataviña was passed. This place proved to be a small cluster of 3 or 4 adobe houses situated in the bottom of a precipitous rocky canyon. Beautiful tall palms were growing here and gave the place a most picturesque aspect. The road was extremely steep getting out of this canyon and I was glad to have a compound low gear. The afternoon was bitter cold with a brisk west wind and overcast sky. The dense forest of Cirios and Giant Cactus dwindled to a very scattered growth. Camped at dark near the roadside 7 miles south of Cataviña amid a scattered growth of Cirios & Giant Cactus. The terrible Chollas were seen near here. These are the cactuses that cause all the trouble and well they may for such vivious thorns I had never before seen on cactus.

I set out a dozen traps. The sky seemed so threatening that it was necessary to rig up a shelter out of a Ford canvas. During the night light showers fell.

Feb 4th

The traps held a half dozen animals and nearby Cactus Wrens, Gilded Flickers & Scott Orioles were seen & heard, so we decided to stay over a day or so to collect. It was a dry camp but we had plenty of water for three day's stay. I went hunting down the canyon which according the Nelson's map was Jaraguray, tho I called the locality 7 miles south of Cataviña.

I saw 1 Golden Eagle, many Black-tailed Gnatcatchers, several Gilded Flickers, Cactus Wrens, Ravens, lots of Gambel Sparrows, 1 Scotts Oriole and great coveys of Quail. The day was miserably cold with a heavily overcast sky with showers of rain falling within sight all day tho none hit camp.

Set another line of traps again this evening. Soon after sundown a misty rain commenced to fall and by 9 p.m. was raining hard. The old shelter canvas leaked badly and misery prevailed.

Sky completely cleared of clouds before morning and everything froze solid. The tent & Ford covers were like boards - everybody cold.

February 5th 1928

Traps held single Dipodomys this morning. I am especially desirous of obtaining a series brush rabbits and as they seem to be fairly common shall try for a series. Got one this a.m. We went hunting & got a few birds, including 4 Bewick's Wrens. These birds may prove very interesting so am our for a series. quail abundant as usual. Linnets were seen building nests in palms in arroyo nearby. Phainopepla common.

Had hard luck with rabbits, missed 2 good shots, Jack Rabbits very abundant. Saw deer tracks near camp. Saw 3 pairs of Mocking Birds. Mrs. C. found a Costa Hummingbird building a nest on a chollas cactus. This bird seemed very common and dozens of them were seen.

Feb 6th

We went out this morning with a determined effort of securing a series of Bush Rabbits. Three hours work resulted in the taking of five specimens. The wind blew violently all day and felt as tho it hailed from the snowy crests of lofty mountains. This made work difficult and we were well until after dark getting things finished up.

Feb 7th

We packed up and left getting a 10 o'clock start. Jaraguay was passed and found to be a deserted road camp in the bottom of a canyon. Water was obtained from a pit dug in the stream bed. This water was almost emerald green due to mineral stain and of rather disagreeable taste. However, the canteens were all refilled as I did not know what was ahead or when the bad wheel would break. The hill just south of Jaraguay was exceptionally steep and very rocky but was pulled without difficulty. Reaching the other side the road led over a large

flat plain that seemed void of all growth except prostrate stunted brush. The cirios were not growing here nor did they seem to be on the distant eastern hills.

Well towards the southern end of this plain two huge hills were seen that were of huge granite boulders and not a vestige of plant life on them. This outcropping seemed to be the only granite in the whole vast area of lava flow. After crossing the divide that leads into Chapala a fair stand of Giant Cactus was found on the hillsides. The dry lakebed of Chapala was next crossed. After again getting into the cactus-covered hills a machine came up from the south, 9 men occupied this car and when they stopped they asked for gasoline of which I had none to spare. They all surrounded my car and for a short time I felt certain that I was in for trouble but they saw the Museum sign on the Fords and guessed they wouldn't be safe in carrying out their ulterior plans. The whole lot looked like brigands. Days later I learned that my fears were well founded and that they had been beating their way about.

Above the Chapala plain when crossing the divide into the next valley a most beautiful mountain was seen covered with huge Giant Cactuses. Several miles of this beautiful cactus forest lining each side of the road was passed. Then a long sandy stretch. This region was amid a tree yucca forest and of a species I had never before seen. Large rubber plants began to appear commonly and again the cirios and Elephant trees joined the yuccas and Giant Cactuses making a most interesting region florally.

9 miles north of the locality called Punta Prieta I shot a Xantos Jay. The capture of this bird probably extends the range of the species some distance.

We reached Punta Prieta at near sundown. This place was once a mining town of a dozen adobe houses but now abandoned. A family or two live in the adobe houses tho a greater portion of them are roofless now.

Camp was established near an old adobe.

February 8th 1928

Spent this time making collection at Punta Prieta, Mouse traps were run thru the cactus in the sandy arroyo bottom. Gopher sign was seen and a small series of Thomomys taken.

On the 10th in company of a very nice Mexican we drove down to San Andreas 12 miles south & west of camp towards the coast. A lone Date Palm marked the water hole. The Mexican shot a small doe and Mrs. C. and I hunted hard thru a marshy area

and a great mesquite forest getting very little. On the way back 6 Harris Hawks were flushed from a rabbit they had just killed. This corporative hunting seems to be common with these birds. On the 18th another group of 6 hawks were seen hunting near Punta Prieta.

This Mexican told me that occasionally Caracaras (Kalaybes) came up to Punta Prieta and he had seen Cardinals in the mesquites at San Andreas tho only during the summer.

Horned Owls were heard every night during the stay but none secured.

On the 13th Mrs. C. came down sick with water poisoning. The water here is extremely saline and upset her stomach for several days. I thought the trip was surely to have a tragic ending. However, by careful nursing she rallied and on Feb. 22nd we again headed south with San Ignacio as the goal.

February 22nd 1928

Left Punta Prieta about 10:30. we reached the coast at Santa Rosalita Bay. Here the road followed the ocean for about 30 miles, all rough, thru inland to over the Lost Plains to Mesquital. This place seems to be a fine collecting station. Saw a beautiful Vermilion Flycatcher on the corral fence and the first Caracara. Birds were plainly abundant. A pair of Xantos Jays (2 miles to the west), 1 pair of Mourning Doves, lots of Gambel Sparrows.

The sun was setting as we left this place and getting out on the Plains again a cold ocean breeze was blowing. We ran until almost 9 o'clock, camping in a large canyon 5 miles west of El canyon.

Set a few traps as this is rather close to Colmalli, the type locality of a Dipodomys.

Feb 23rd

Up early this morning. Saw a Caracara and several Gilded Flickers near camp.

Traps held a short catch of species of Dipodomys.

The cactus in this canyon and for the next 6 miles is of the most beautiful I have ever seen. Great towering Cardons with a great variety of smaller species forming a veritable cactus jungle.

The canyon before reaching El Canyon proved to be the most picturesque place seen on the entire journey, towering canyon walls of lava with huge Giant Cactus growing everywhere.

Calmalli was reached in a short time and proved to be an old former mine town with a host of deserted buildings. However, it is noted for its splendid water so all the empty vessels were filled up. Several White-winged Doves were seen near the water tank.

The road now led into a range of low rocky hills that were very rough, Every canyon bottom in this area seems to have been turned upside down by the miners during the gold rush many years ago. The road was also rough. Campo Aleman (German Camp) was next and after more miles we rolled out onto the Viscaino desert. Here the road was cut thru a dense nungle of desert growth and was as straight as a road could be for miles & miles. In fact, all the rest of the day we hardly veered a point tho unbelievably rough.

About 3:30 in the afternoon Mrs. C. heard a clanking noise under her car & upon examination I found the V rod broken. Hasty calculations as to distance from San Ignacio figured out about 45 miles to go. I wired the thing up as best I could & cut the speed in half.

We were also now on the roughest part of the road, for the plains had been left behind and the road was across the lava-covered mesa.

Camped for the night 15 miles from San Ignacio. Wind blew violently all night.

February 24th 1928

Broke camp early this morning & kept slowly onward for San Ignacio. 5 miles from the place we found Parra & his stays stuck in the middle of the road with two flat tires so had to wait for him to make the repairs before we could pass. Reached San Ignacio at noon and a beautiful place it proved to be. The watered area of the valley is filled with date trees while situated about the center of this verdant area and on the south side of the valley is the old Mission with the Pueblo clustered around it. Quaint and old.

Feb. 27th

Went hunting north of the Pueblo this morning, followed the old Padre Canal almost to its source. Birds were not common. I saw Hooded Oriole, Gambel Sparrows, Ravens, Turkey Vultures, Audubon Warblers, Mockingbirds, Brown Song Sparrows, Black Phoebe, Green-backed Goldfinches, Ash-throated Flycatchers. Baldpate Ducks, Gadwall Ducks & Coots were seen about darting on an estuary, also 1 Belted Kingfisher. Gila Woodpeckers were fairly common. White-winged Mourning Doves and Ground Doves were seen.

February 28th 1928

Boys brought in female coyote this morning. The poor beast had been dragged a mile or more and offered no resistance when I killed it. Went hunting this morning, saw lots of ducks at a distance - Ruddy, Baldpate, Mallard, Gadwall, Spoon. Saw one each of Eared & Pied-billed Grebes. Saw 1 Pipit, 1 female Cardinal, 1 San Lucas Thrasher, many Gambel Sparrows, many Audubon Warblers, Hooded Oriole, several - 1 Caracara, 1 Red-tailed Hawk.

During the afternoon a woman brought in two Valley Quail and a Robin to sell. The poor birds were half dead from handling.

Feb 29th

Boy brought in a live Spilogale this morning.

Hunting again west of camp. Shot the first Goldman Yellow-throats for the trip, saw 2 Green Herons, looked like franeri, 2 American Egrets, lots of Coots, 3 Cinnamon Teal, Costa Hummingbird, 2 Pileolated Warblers, Pied-billed Grebe, many Green-backed Goldfinches.

March 1st

Hunted again thru the same place as yesterday, lots of Valley Quail, 4 Killdeers, Plovers, 2 Carolina Rails, Cinnamon Teal (several), Baldpates, many Pileolated Warblers, Lutescent Warblers, many San Lucas Swallows.

Day dull, threatening rain. Heard Horned Owls during the night. Boy brought in 1 Perognathus and 2 Dipodomys (5-toed).

March 2nd

Hunted about 3 miles down canyon from Pueblo. Small stream with occasional pond. Scattering date trees, water on either side of canyon with area of desert growth between, many Palo Verdes.

Shot at San Lucas Red-tailed Hawk, saw several Lincoln Sparrows, 1 Kingfisher, 1 Pipit, 2 Wilson Snipers (stream). 1 Spotted Sandpiper flushed from shore of pond. Flushed 1 Black-crowned Night Heron from date tree near pond. Many Pileolated Warblers, West. Gnatcatchers, Gambel Sparrows, Audubon Warblers. Shot at Gilded Flicker, saw many San Lucas Swallows, 2 Rough-winged Swallows, 2 B.H. Grosbeaks.

Boys brought in small female wild cat this morning.



March 3rd 1928

Stayed in camp today. Boys brought in a Ground Squirrel and an adult male Bassarisc. While skinning this animal late in the afternoon a few black Zone-tailed Hawks flew over.

March 4th

Went hunting up the valley getting as far as the old Padre Dam. There seems to be nothing left of the old structure and at present the dam consists of rocks piled up "wall like" to a height of approximately 8 feet and a width of 8 feet filled with soil. Saw many Gadwall and Bald-pate Ducks, many Audubon & Pileolated Warblers, 1 Lutescent, 1 W. Ruby-crowned Kinglet, 1 Frazier Green Heron, many Western Gnatcatchers. Boys brought in another Bassariscus this morning.

March 5th

Had a few birds from yesterday and boys brought in a nice fox. Not feeling well so did not go hunting. Took two shots at a Zone-tailed Hawk late this afternoon. Visited the Mission.

March 6th

Found there was a small garage in town so journeyed over & found the Ford part, put in most of the day at this work. Went over the collection and Mrs. C. packed all skins that were dry.

March 7th

I drove the Ford up canyon  $5\frac{1}{2}$  miles, getting far above the watered area. I found a fair stand of Elephant Trees and cactuses growing on extremely rocky ground. Birds even scarcer. I saw several Verdin, 2 Ash-throated Flycatchers and a Gila Woodpecker, so drove back & went hunting near the old Padre Dam site. Found 7 Western Vesper Sparrows on an open glade. Flushed a Wilson Snipe from the shore of the small lake above the dam. Saw 1 Western Kingbird on a fence (very shy).

March 8th

Hunted along the arroyo this morning, getting Yellow-throats, Song Sparrows etc. Saw 2 Western Kingbirds. Nothing new to the list except the taking of a Florida Gallinule. Found a place where I feel certain Microtus are living & will set traps this evening. Set about 35 traps thru the willow association this evening.

March 9th 1928

Traps held about a dozen *Peromyscus* of two kinds, *Peromyscus m. coolidgei* and *Peromyscus e. eva*. Hunted along the arroyo with nothing new. Set line of traps along the stream.

Bancroft and a party came in just after sunset & later spent an hour or so in camp.

March 10th

Hunted down-stream this morning & looked over my traps which held only *Peromyscus e. eva*.

Bancroft & party left at noon today. Set my traps again thru the arroyo near the stream. I am beginning to believe that the trails I thought were *Microtus* are in reality Wood-rats. After dark a large bunch of boys came into camp with a dog for me to shoot. After some deliberation Mrs. C. advised against my taking part in the deal and I was later glad that I had heeded as it was a plot on the boys' part to get me in trouble with the dog's owner. All this brought that I refused to pay their price for large animals.

March 11th to 19th

Three days were spent working big stuff which I bought from the boys and during dull days small traps were set along the rock walls, here 2 species of *Perognathus* and *Peromyscus* were taken.

March 19th

Went hunting for the first time in 10 days today. The bird population hadn't changed. Saw lots of Gambel Sparrows, many Audubon Warblers, 2 Pipits, 1 Wilson Snipe, 1 Pied-billed Grebe, many Coot.

2 unusual birds were taken - an Eastern Phoebe from a stick near the tules in the creek bottom and a Xantus Hummingbird. This latter bird acted in a manner totally unlike our Calif. Hummers during the deep shade and always returning to it after sailing into the air after insects.

March 20th

Boys brought in 2 big skins today, a fox and a *Bassariscus* so didn't leave camp.

March 21st 1928

We started getting things in order to break camp. I expect to make only a short run to Muleje and bring back all specimens to San Ignacio for preparation.

March 22nd

I left one Ford at the local garage and stored all equipment including the packed up collections at Mrs. Maria Leree's.

We left about 11 o'clock for Santa Rosalia. The road leads east and in a very short distance we were bumping over the boulder filled road thru the lava capped mesa.

A few Elephant trees were seen tho they were very small compared to those of Punta Prieta. Cardons and chollas were the principal cactuses with a good sprinkling of ocotillo on the hillsides. Spent an hour in a small sandy wash that was not over 100 feet across. The Ford started to dig in and I had to dig it out.

20 miles east of San Ignacio and about 5 miles east of a small ranch 5 Cape cardinals were seen 2 males and 3 females.

The elevation had been gradually rising and now a very steep grade was found. At the foot of this steep grade a rather level country was found & great forests of Cardones were growing in suitable places.

Brewsters Woodpeckers, Gilded Flickers, San Lucas Sparrow Hawks, San Lucas Swallows, San Lucas Thrashers, in fact nearly all the birds I knew to exist in this arid association were found. The small valley<sup>is</sup> known as Yaqui Valley. After some miles another very steep hill<sup>was</sup> encountered. All down. Led into Canyon Diablo. After descending this grade we were soon at the shores of the placid Gulf of California again. Here were lots of Lark Buntings and Lark Sparrows feeding near the beach. A lone Western Gull was seen and several ~~Brewster~~ <sup>Brewster</sup> Boobies were fishing near the shore. We found Bancroft and party at the French Hotel & had dinner with them.

Camped for the night on the hill south of Santa Rosalia.

March 23rd

Made an early start this morning and after an hour of rough up and down hill rolled out on to the Llano de San Bruno. This is a great plain bordering the Gulf of California and on the western side a rocky range of mountains rise sharply. This plain is cut by many sandy washes running eastward from the mts. and a heavy stand of Palo Blanco trees grow along them. Over the region between the washes great forests of Cardons and cholla exist interspersed with many ocotillos.

Here Xantos Jays were abundant as were many other birds -White-winged Doves, Gilded Flickers, Cactus Wrens, Verdins. 8 miles south of San Bruno a Pyrrhuloxia was seen perched in a bush near the road. It was too close to shoot directly at it and a shot fired to one side failed to kill the bird. I gave chase but it was never seen again.

Mulege was found to be a beautiful little place nestled amid a jungle of palms and banana trees in a well watered narrow valley being in west to east direction and at almost sea level. An estero runs about half a mile up the valley and several dugout canoes of the returning fishermen gave the scene a unique setting. This region is noted for its poor health conditions - malarial mosquitos exist here and cause much suffering and a few deaths each year. Only a couple of hours were spent here tho the place did not seem very attractive from a collector's point of view.

Near the light house at the entrance of the estero I saw a Say Phoebe. Several Green-tailed Towhees were seen while we were eating lunch and great flocks of coots were swimming in the estero. On leaving Mulege we stopped to hunt a short time. Mrs. C. shot a male Cardinal and a male Xantos Hummingbird while I found a Gilded Flicker & a San Lucas Woodpecker. Birds were not abundant.

Spent the night in the middle of Llano de San Bruno where a long line of traps were run.

March 24 1928

My traps held a number of Dipodomys merriam and 3 Perognathus. We shot birds all along the route through Llano de San Bruno. Saw numbers of Gambel Sparrows, Sage Thrashers & heard the song of Mangrove Warblers when stopping near a mangrove swamp just north of San Bruno.

Elegant Terns were fishing along a narrow bay and were beautiful in their pink plumage. Mocking Birds were not uncommon.

Arrived in Santa Rosalia about noon & had lunch at the French Hotel. Made some purchases of food and gasoline & set forth again for San Ignacio. Getting back to the small valley called Valle de Yaqui we shot a number of birds & spent the night running the traps.

March 25

Traps held a fair catch mostly Dipodomys merriami. Hunted a short time & started on. Shooting birds along the route. Saw a pair of San Pablo Towhees 20 miles east of San Ignacio but they were too wild to get a shot. Arrived in San Ignacio about mid afternoon tired and with a great bunch of work to do.

March 26 1928

Spent preparing the material secured on this trip to Mulege and getting ready to start on the homeward journey.

March 30

We left San Ignacio today about noon bound for Campo Los Angeles, 32 miles northward.

The first 15 miles of the route lay over the lava plateau and was very rough. Cordones, cholla and other cactus were prominent. Campo Los Angeles seemed an ideal collecting locality. There was a general intermingling of all associations Cardons, Yuccas, mesquites and other desert growth growing in profusion. Gopher sign was abundant and was the main objective of this stop.

In all 5 days were spent here. I tried running a line of small traps but lost 26 traps in the two nights by coyotes. Almost every trap that held an animal being picked up by these varmints. I finally gave up small traps. A full moon was shining so at night I secured a rabbit carcass to a 25 foot piece of wire and fastened it to my bed. When a coyote grabbed it the pull would jar the bed awaken me & in this way I shot 3 coyotes.

Desert Thrashers were found here in very limited numbers. Saw a few Lark Buntings & Gambel Sparrows. April 4th two Caracaras were about the camp continually. Terrific wind storm April 3rd and 4th.

April 5 1928

Wheels again rolling this time for Calmalli where a short stop is to be made. Shot birds along the way. Saw many Mourning Doves at a small dried-up lake bed that was covered with weeds 25 miles south of Camp Aleman.

The road ran very straight and was walled at turns by huge Giant Cactus and a growth of many species of desert plants. Arrived at Calmalli about sundown & found a fairly comfortable quarter in the old deserted building of the company offices. The region about Calmalli is not at all inviting to the collector. A sparse growth of low brush exists but is the type locality of *Dipodomys merriami pluttycypalus* and I wish to secure a good series.

Between Camp Aleman and Calimalli - a distance of 5 miles through a rolling hilly country the first Candlewood trees

were seen. This is near the southern limit tho I am told by natives that they exist on the sierra to the eastward still further south. I was also told that 20 miles east of Calmalli the Palo Blanco reach their northern limit. At this locality Elephant trees are becoming scarce and are only found on the north exposure. Five days were spent at Calmalli.

April 11 1928

We packed up & left this morning bound for Mesquital where several days are to be spend getting a general collection. 5 miles north west of Calmalli we passed the cluster of adobe shacks called El Campo. Here the road passed thru a narrow canyon. In this canyon a huge forest of Cardones were growing even the rocky slopes being well covered with these huge cactuses. We heard San Pablo Towhees here but didn't see one. Passing thru this canyon the route lay over the northern edge of the Viscaïno desert. The next 20 miles was thru a tangle of Yucca, Cardon, Petyia cholla & ocotillo growth, indeed a jungle of thorns. The land is all level but it would be practically impossible to get the car off the road. Xantos Jays, Cactus Wrens & Gilded Flickers were the most abundant birds seen.

It was noticed that the Cardons were most abundant on the eastern side of the desert and as the sea coast was approached yuccas became predominant until they formed the entire forest & replaced most of the cactus.

We reached Mesquital about 4 p.m. with a cold fog laden west wind blowing, giving a dismal aspect to the place from a collecting standpoint.

April 12

This place is in the yucca belt. Cirios are in their normal abundance on the north slope of a steep escarpment which rises to the mesa of old lava flow, probably a thousand feet elevation above the valley floor. An occasional Cardon is present, but much in the minority. Both species of patyia tho the dulce is rare. On the slope rises opposite the steep escarpment agaves are predominant and are of the heavy leaved variety found commonly north at least to San Antonio del Mar. Fruitea is the predominant shrub growing to large proportions in the more favorable soil of the washes.

Birds were not abundant. Cactus Wrens, Dryobatus, Mearns Thrashers, Western & B.T. Gnatcatchers were present. Saw an Alcone = Harris Hawk. Gopher sign was present both in the cactus region and the washes. A line of traps set last night caught several specimens of each Dipodomys a. peninsularis and Dipo. m. platycephalus with several Peromyscus m. cooledgei.

Saw several Green-tailed Towhees, 3 Lark Buntings, several Lark Sparrows. Set a steel trap this evening.

April 13 1928

Steel trap held a coyote. Hunted a short time this morning going over the yucca - agave slope north east of camp. Saw only a large bunch of quail until reaching the more densely chaparraled wash. Here GambelSparrows were present and a single Long-tailed Chat was heard.

Shot a Xantos Jay. Set all gopher traps, great difficulty in locating good holes & by evening had but 2 specimens. Set steel traps this evening.

April 14

Steel traps untouched tho a wild cat had taken most of the bait. Set the gopher traps with great difficulty. Saw lone Caracara. Mrs. C. found n/3 B.T. Gnatcatcher.

Worked hard with gophers but success not great. There seems to be plenty of old workings but in this sandy country these animals fill up the holes behind them and it is necessary to locate fresh work to secure success.

April 15

Had a few traps set about camp and did not hunt. Not feeling especially well so took it easy most of the day. Set the gopher traps but luck poor.

April 16

Two steel sets were both empty this morning. Hunted a short time but still under the weather. Shot a Towhee, a San Lucas Swallow & a Verdin.

Had a few mammals left from yesterday. Hunted in the afternoon, saw 2 Hooded Orioles, 1 Scott Oriole, 2 Gilded Flickers, 2 Cedros Isl. Wrens. 4 Caracaras were about the place today and the male Vermilion Flycatcher came back. Set line of mouse traps this evening.

April 17

Mouse traps held small bunch of *Dipodomys a. peninsularis*, *Dipodomys m. platycyphalus*, *Peromyscus m. cooledgei* and a single *Perognathus a. arenarius*. We went hunting after breakfast getting nice bunch of birds, including a couple of young Roadrunners. Set line of mouse traps this evening thru the cactus slope and over sandy ground.

April 18 1928

Traps held poor catch this morning. Steel traps held mangy coyote that I may not save. Packed up in preparation to depart tomorrow.

April 19 1928

Broke camp at 8:30 this morning bound for the sand dunes about 10 miles south of Santa Rosalia Bay. The road after passing across the large valley in which Mesquital is situated, ran through a series of low hills, thence out onto the open plains.

In these hills the last patyia dulce were seen.

I stopped to give chase to a couple of Black-throated Sparrows that proved too wild to get within range of and while chasing the birds Mrs. C. found a beautiful Costa Hummer's nest. It was situated on a lichen covered horizontal branch of an ocotillo and contained one fresh egg. This was by far the most beautiful Hummer's nest we had ever seen and it was left with regrets.

The open plains were heavily clad with yuccas and fruitea brush and bird life was scarce. Arrived at the ocean about noon with an overcast sky and bitter cold wind blowing out of the west. After some planning I went hunting down the sand dunes while Mrs. C. hunted for a camp site and what birds she could find.

I found birds rather scarce and after a 6 mile walk up and down the sand hills came in with several Gray Sage Sparrows and a coiple of Desert Thrashers. The latter are extremely wild and only obtained by hard work. Mrs. C. had fair luck with Sage Sparrows. We put our catches together and divided equally.

Set lines of mouse traps near camp. Looked them over by lantern light & took out about 25 mice, mostly Peromyscus, which were simply swarming. Skinned until 12 midnight.

April 20

Traps held another catch of Peromyscus this morning. Day windy. Got an early start this morning going again into the sand dunes country. I traveled 4½ hours walking steadily

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and secured only 1 Shrike. Must have made 7 or 8 miles thru the sand. Saw only 1 Thrasher and 1 Sage Sparrow, both extremely wild. Picked up bunch of quail for the larder. These birds are fairly common in the sand dunes and act very much like desert quail when pursued, making about 2 miles to my one. Saw a Purple Martin male, and 2 Sage Thrashers. Toward evening the wind abated and Mrs. C. & I went hunting. I shot a young Flicker that had left its nest and 1 Desert Sparrow. Mrs. C. was lucky & got a nice Desert Thrasher.

It was decided to move on tomorrow as we have only enough water to get to El Marmol.

April 21 1928

Broke camp this morning and after the Fords were loaded and ready to start went hunting. The day was quiet with high clouds and an ideal time to hunt. We found a few Sage Sparrows and together killed 7. Saw one very wild Thrasher.

Got under way about 11 o'clock. Road paralleled the ocean for several miles then turned inland through a canyon in which a luxuriant growth of desert flora was present. An Osprey had her nest on the tip top of a Cardon and was evidently sitting - tho safe as far as I was concerned. In this canyon the first shumacs were seen and was the first plant life to remind me of the San Diego region.

Passing well up this canyon almost to its head in a northerly direction, the road again turned westward towards the ocean. After reaching the shore again the road passed as near as possible to the shore line until reaching Santa Rosalia Bay.

Passing a small salt marsh that seemed heavily overgrown with Salicornia, I scouted thru it in hopes of finding a Marsh Sparrow's nest. This was not my luck nor did I see a single avian representative that would nest in the confines of a salt marsh. The discoveries were entirely mammalogical. The tule salt grass was honey combed with runways and the fecal matter appeared to be that of Woodrats, tho of this I was not certain. There was also much gopher work and may well be a good form. I regretted that a stop could not be made here but the limited water supply would not permit.

On reaching Santa Rosalia Bay the road turned north up a large dry canyon. A sparse growth of desert plants.

About 5 miles up from Santa Rosalia we ran onto a pair of Xantos Jays. By quick pursuit we collected both birds.

Arrived at Punta Prieta about 5 p.m. & plan to spend tomorrow here to prepare our birds.

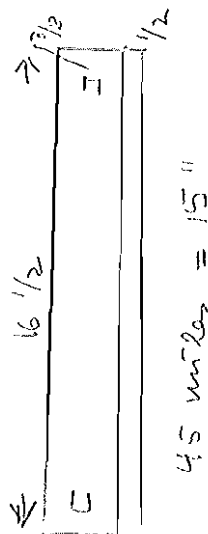
April 22nd 1928

Spent the day working over the specimens shot yesterday. I found out from a very intelligent man here that the locality called 10 M.S. Santa Rosalia Bay was in reality La Lomita Marcia = "The little hill by the Sea" - so all the labels marked 10 M.S. will have to be changed.

We shot 4 Say Phoebes & saw a Caracara, few San Lucas Swallows and single Cliff Swallow seen early in the morning.

Plan to leave tomorrow.

San Ignacio	.00
Los Angeles	32.00
Calmalli	77.8
Mesquital	109.1
10 M.S. Santa Rosalia Bay	129.0
Punta Prieta	173.0
El Marmol	277.8
San Fernando	304.9



October 8th through

October 27th 1929

Trip to Cabazon, Riverside Co., Calif.

October 8th 1929

Left San Diego 12:30 bound for Cabazon, Riverside Co., arrived at Cabazon 4:30.

Set traps (65) just north of the R.R. station on Indian Reservation land.

Looked them over about 10 p.m. by lantern light, found 1 *Dipodomys a. cabazonan* & 1 *Perognathus l. panamintinus*. Prospects seemed very poor.

This region had apparently had some heavy rains recently as a great amount of annual grass was sprouting.

The predominant shrubs are screwbean mesquite and a composite.

Wind blowing a gale and cold.

Oct 9th

Traps held 4 *Dipodomys a. cabazonan* & 4 *Perognathus l. panamintinus*. Unfortunately several had broken skulls. Wind blew hard all day. Set again through same type of ground.

Went over traps by lantern light at 10 p.m., found the following catch: 2 *Peromyscus m. sonoriensis*, 3 *Perognathus l. panamintinus*, 4 *Dipodomys m. sinerolus* and 5 *Dipodomys a. cabazonan*.

Oct 10th 1929

Wind blew all night long. There seems to be no abatement of this incessant west wind in San Geronimo Pass.

My traps held 7 *Perognathus l. panamintinus*, 6 *Dipodomys agilis cabazonan* and 4 *Dipodomys m. sinialus*. Again bad luck prevailed with the skulls as several of the much desired species were damaged.

Wind blew itself out in midafternoon and was nearly dead calm when the traps were set.

Went over the line again at 10 p.m. finding a very light catch: 1 *Perognathus l. panamintinus*, 2 *Dipodomys agilis cabazonan* and 3 *Dipodomys merriami sinaloas*.

October 11th

Traps held 6 *Perognathus l. panamintinus*, 5 *Dipodomys m. sinaloas* and 5 *Dipodomys agilis cabazonan*. Calm all night absolutely no wind. This morning sky clear.

Saved 15 of my specimens, finishing before noon. During afternoon ran down to Indio 37 miles away and spent a most pleasant afternoon with Dr. Swingle, certainly a most congenial fellow.

Back to Cabazon about sundown, set out my traps then ~~down~~ drove up to Banning & called on Mr. Gilman - had a very pleasant evening.

Looked over my traps by lantern light & found 4 Perognathus l. panamintinus, 1 Perognathus f. fallax, 2 Dipodomys agilis cabezonan & 1 Dipodomys m. sinaloan. This latter specimen has the most unusually example of damaged tail I ever saw.

Oct 12

My traps held 5 Dipodomys m. sinaloas, six Dipodomys agilis cabezonan, six Perognathus l. panamintinus, 1 Peromyscus m. sonoriensis and 1 Perognathus f. fallax.

Packed up and pulled for home.

October 20 1929

Left San Diego at 5 a.m. with Frank Stephens and A. W. Anthony bound for Jolon, Monterey Co, ran through heavy fog near La Jolla and again near San Juan Capistrano.

Arrived at Venice about 8:45 and Santa Barbara 12:15, San Luis Obispo 3:30, arrived at Jolon about 6:20 p.m. Set out traps back of (south) after opf the store by lantern light.

October 21 1929

Our traps were empty so spent the day scouting. I found a small colony of Dipodomys about 1 mile southwest of the town and saw a good deal of sign in the river bottom, I also found a better place to camp and after lunch we moved on.

This camp is about 1½ miles s.w. of Jolon and is at the base of a range of oak and pine clad hills. During my morning walk I shot a few birds, 5 Calif. Jays, 2 Wren-tits and a Plain Titmouse. Lewis Woodpeckers were abundant and Calif. Woodpeckers were fairly common.

I set my traps in the Dipodomys colony. It was situated along a pasture road on the north bank of the river, Chaparral of mohogany brush grew all about.

Anthony set his traps along the second bottom of the river while Stephens kept up on the bench near the edge of the brush. We looked at Stephens' line by lantern light (8:30) and found that no traps had been disturbed.

We then went over my line & found four *Dipodomys heermanni jolonensis* (wide headed).

Oct 22nd 1929

My traps held 2 more *jolonensis*, Anthony's line held 2 *Dipodomys venustus sanctalean*, Mr. Stephens caught nil.

Anthony saw two *Eutamias* in the willow cottonwood river association. Point pinco juncos fairly abundant. About 3:30 p.m. I went hunting along the river bottom, saw 2 chipmunks, killing one of them. Saw many migrants, Warblers, Pileated, Audubon, Tolmie, Hemet Thrush (dwarf). Valley Quail fairly swarmed. Cottontail rabbits abundant. Set traps over 2nd river bottom this evening. Wild rose, poison oak & sandwillow thickets alluvial soil cover coarse sand.

Set my traps through the willow bottom - was not well pleased with the prospects. Stephens set his along the edge of the hillside chaparral and into the river bottom. Anthony had his line in the river bottom. Went over my line about 8 p.m. and found but a single Dipo. Anthony declared he could find us a short route back to camp and we got lost - spent two hours thrashing around in the woods. His line held 4 Dipo.

October 23rd

My line held one more Dipo, Anthony caught 2 and Stephens caught 6.

Went hunting in the afternoon and shot a pair of Spotted Towhees & 1 Bewick's Wren.

Set my traps along the edge of a corn field this evening (river bottom). Looked at them about 8 p.m. & found 5 fine Dipo. Anthony had 4.

Oct 24th

My traps held 5 more Dipo & 3 *Peromyscus m. gambeli*, Anthony 1 more Dipo, Stephens 1 Dipo & 1 *Peromyscus*.

I shot a Red-breasted Sapsucker near camp.

In the late afternoon I scouted the hill tops for prospective *Dipo venustus* work - found some sign. Saw lots of deer tracks.

Stephens & I set our traps on the summit of the hills amid the dense chaparral (scrub oak & *adenostoma*). This appears to be our only chance of obtaining *Dipodomys venustus sanditenuus* as I am now satisfied all specimens taken so far are of the *heermanni* groups.

October 25th 1929

Our traps held only Peromyscus - 6 truei gelberti, 1 californicus californicus, - 3 maniculatus gamboli & 2 Perognathus californicus.

I skinned up the Perognathus and the single Peromyscus californicus, then packed and left for Cook P.O., San Benito Co., at 11 a.m.

We arrived at Cook P.O. about 3 p.m. and found the post office had recently been renamed Pinnacles. On our way over we saw about 2 dozen Yellow-billed Magpies. Camp was established in the old parsonage about 1 mile south of the post office and on the south side of the main highway. The junction of the Pinnacles National Monument road was a few rods west of the old house.

We set our traps up a wash and into the dense chaparral. This brush cover was mainly adenostoma and very dense in places.

I looked at my traps about 7:30 and found 3 Dipodomys h. goldmani in the part of the line set through the open wash.

October 26th

My traps held 3 more D.h. goldmani, 2 Peromyscus m. gambeli and 1 Dipodomys elephantinus. Anthony caught 1 D.h. goldmani and 1 Perognathus c. californicus & 2 Peromyscus m. gamboli.

Mr. Stephens had the best catch of all - 3 Dipodomys elephantinus - 3 Perognathus c. californicus, 3 Peromyscus m. gamboli and 2 Peromyscus truei gilberti.

I put up my skins while he went out fossil hunting.

We set our traps this evening over the chaparral covered side hills on the eastern side of the valley. The brush was mainly of two species - Buckwheat & Adonostomia. Deer seem very abundant here & Mr. Stephens was told by a neighbor that both black & white tailed were present.

I looked at my line about 7:30 and found 1 Dipodomys venustus and 4 Perognathus californicus.

October 27th 1929

My line held 1 Dipo elephantinus, 1 Perognathus californicus and 1 Reithrodontomys m. longicaudus.

Stephens caught 1 D. elephantinus, 2 Perognathus californicus, 3 Dipodomys h. goldmani and 2 Peromyscus t. gilberti. Anthony caught 2 D. elephantinus & 2 Peromyscus t. gilberti.

About 3 this afternoon Anthony and I drove up to the Pinnacles National Monument but saw nothing of interest. The nature guide said it required 2 hours to make the trip on foot through the interesting parts and we couldn't afford that much time. Filling our canteens with fine spring water we returned just in time to set traps again. Saw 4 Black-tailed deer - very tame. I ran mine over the same area trapped in last night.

Anthony did likewise, Stephens chose a new locality on the west side of the valley.

After dinner while sitting around the table talking a Seminole Bat flew into the room and I caught it with my hat.



Birds observed in the  
Bard - Potholes - Yuma Locality  
in Spring 1930  
March 27 - June 27

/ 23 October 1984: /  
/ Susan Breisch /  
/ suspects these are /  
/ the notes of /  
/ S.G. Harter /  
/ specimens collected /  
/ incl. #12719 - 13237/  
  
/ (a few exceptions) /  
  
/ Huey visited camp /  
and collected /

Birds Observed in the Bard - Potholes - Yuma  
 Locality in Spring 1930  
 March 27 - June 27

- 1 *Phalacrocorax a. albociliatus*
- 2 *Pelecanius erythrorhynchos*
- 3 *Ardea h. treganzai* L
- 4 *Ilerodias egretta*
- 5 *Fulica americana*
- 6 *Pisobia minutilla* L
- 7 *Oxyechus vociferus* L
- 8 *Lophortyx gambeli* L
- 9 *Zenaidura m. marginella* L
- 10 *Cathartes a. septentrionalis*
- 11 *Accipiter velox*
- 12 *Falco sparverius*
- 13 *Geococcyx californianus* L
- 14 *Dryobates s. cactophilus* L
- 15 *Centurus uropygialis* L
- 16 *Myiarchus c. cinerascens* L
- 17 *Sayornis sayus* L
- 18 *Sayornis nigricans* L
- 19 *Empidonax difficilis* L
- 20 *Pyrocephalus* L
- 21 *Molothrus a. obscurus* L
- 22 *Agelaius p. sonoriensis* L
- 23 *Sturnella neglecta* L
- 24 *Icterus bullocki* L
- 25 *Euphagus cyanocephalus*
- 26 *Carpodacus m. frontalis* L
- 27 *Passer domesticus*
- 28 *Zonotrichia l. gambeli* L
- 29 *Spizella p. arizonae* L
- 30 *Melospiza m. sattonis* L
- 31 *Pipilo aberti* L
- 32 *Stelgidopteryx serripennis* L
- 33 *Lanius ludovicianus excubitorides* L

March 27 - 1930  
 Yuma, Arizona  
 Birds observed in the  
 Bard - Potholes - Yuma  
 Locality in Spring 1930  
 March 27 - June 27  
 (continued on page 2)  
 Many visitors to the  
 collected.

34. *Vireosylva gilva swainsoni* L  
 35. *Vermivora celata* L  
 36. *Dendroica auduboni* L  
 37. *Geothlypis t.* L  
 38. *Torostoma crissale* L  
 39. *Heleodytes b. coesi* L  
 40. *Auriparus flaviceps* L  
 41. *Poliophtila c. obscura* L  
 42. *Turdus m. propinquus* L  
 43. *Gallinula c. cachinnans* L  
 44. *Gallinago delicata* L  
 45. *Totanus melanoleucas* L  
 46. *Chordeiles a. texensis* L  
 47. *Archilochus alexandri* L  
 48. *Tyrannus verticalis* L  
 49. *Podilymbus p. podiceps* L  
 50. *Querquedula cyanoptera* L  
 51. *Chen h. hyperborea* L  
 52. *Egretta thula thula* L  
 53. *Butorides virescens anthonyi* L  
 54. *Nycticorax n. naevius* L  
 55. *Porzana carolina* L  
 56. *Actitis macularia* L  
 57. *Chaemepelia passerina pallescens* L  
 58. *Circus c. hudsonius* L  
 59. *Accipiter cooperi* L  
 60. *Parabuteo u. harrisi* L  
 61. *Tyto alba pratincta* L  
 62. *Bubo v. pallescens* L  
 63. *Cyrle alcyon* L  
 64. *Colaptes* L  
 65. *Phalaenoptilus nuttalli hueyi* L  
 66. *Nuttallornis borealis* L  
 67. *Empidonax griseus* L  
 68. *Corvus corax sinuatus* L  
 69. *Xanthocephalus xanthocephalus* L

70. *Spinus psaltria hesperophilus* L  
 71. *Passerculus s.* L  
 72. *Zonotrichia l. leucophrys* L  
 73. *Spizella breweri* L  
 74. *Melospiza lincolni* L  
 75. *Oreospiza chlorura* L  
 76. *Hedymeles melanocephalus* L  
 77. *Passerina amoena* L  
 78. *Piranga rubra cooperi* L  
 79. *Petrochelidon albifrons* L  
 80. *Phainopepla nitens* L  
 81. *Vireo h. huttoni* L  
 82. *Miniotilta varia* L  
 83. *Vermivora luciae* L  
 84. *Vermivora ruficapilla gutturalis* L  
 85. *Dendroica aestiva* L  
 86. *Dendroica nigrescens* L  
 87. *Dendroica townsendi* L  
 88. *Oporornis tolmiei* L  
 89. *Icteria virens longicauda* L  
 90. *Wilsonia p.* L  
 91. *Anthus rubescens* L  
 92. *Mimus p. leucopterus* L  
 93. *Corthylio calendula cinerascens* L  
 94. *Poliophtila plumbea* L  
 95. *Melopelia leucoptera* L  
 96. *Hydrochelidon nigra surinamensis* L  
 97. *Chaetura vauxi* L  
 98. *Buteo borealis calurus* L  
 99. *Cypseloides niger borealis* L  
 100. *Myiarchus magister* L  
 101. *Piranga ludoviciana* L  
 102. *Guiraca caerulea lazula* L  
 103. *Hirundo erythrogastra* L  
 104. *Hylodonta ustulata* L  
 105. *Recurvirostra americana* L

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- 106 *Himantopus mexicanus* L  
 107. *Larus* sp. L  
 108 *Phasianus torquatus*  
 109. *Speotyto cunicularia hypogaea* L  
 110. *Sandpiper* sp. L  
 111. *Myiochanes r. richardsoni*  
 112. *Plegadis guarauna* L  
 113. *Nycteria americana*  
 114 *Chaetura pelagica* L

March 27, 1930

I left home this morning at 6:30 a.m. on my way to Huey's ranch at Bard, Imperial Co., Calif., where I will collect birds and mammals for the San Diego Museum of Natural History. There was a low fog on the coast extending back as far as Flynn Springs. The Ford truck was in good condition and I had no trouble on the trip. I stopped at El Centro for lunch and to refill with gas. I pulled into Huey's ranch about 4:00 p.m. I spent the remainder of the afternoon working in the house, cleaning it and unpacking my supplies and luggage. Before dark I strolled about 50 yds south of the house where I collected an Aberts towhee from a low bush. It was the only one I saw in the near vicinity. English sparrows are abundant about the house. I might mention that there was a strong north wind blowing on the desert which abated at dark to a gentle breeze.

March 28

I spent the greater part of the morning cleaning up the house and arranging it in order. A pair of Gila woodpeckers live on the ranch house and can be heard all day calling and tapping on the tree trunks. English sparrows are very common about the ranch and also quite a pest. Linnets are fairly common about the house. I collected a female house finch from the large eucalyptus in the yard. Audubon warblers are also present in small numbers about the palms in the yard. I was able to collect three specimens. This morning I was fortunate in seeing a bullock oriole fly from the date palm in the yard to the large cottonwood about 50 yds south of the house. I followed it and collected it. At the little pond surrounded by tules I saw large numbers of Sonoran redwings which were flying about and calling. As I approached the pond this morning a single western robin flew to a large cottonwood nearby. I collected this bird. This afternoon I saw a pair of turkey vultures circling over the ranch. Meadowlarks are quite common in this vicinity and are most active in the morning and evening when their song can be heard everywhere. I collected a pair in a plowed field south of the ranch. I saw a single shrike near where I collected the meadowlarks. It flew to a cottonwood tree.

March 29

I left the ranch early this morning and went up to Potholes and as far as the lake about five miles above Potholes. On the way to Potholes I saw three Gambel sparrows perching in a quail bush not far from the ranch. At a small pond below Potholes I observed a small flock of about a dozen rough-wing swallows flying over the pond catching small gnats which were very numerous there. I was able to collect one of the swallows. Song sparrows were common here and could be heard singing in the bushes around the pond. I saw a coot in the upper end of the pond. A pair of killdeer was feeding

along the shore as were also four least sandpipers. I collected one of the sandpipers. Audubon warblers were also common about the pond. I then went a short distance above Laguna Dam and hunted in the willow cottonwood river bottom. On my way up there I saw few white pelicans flying over the river. Gila woodpeckers could be heard frequently in the willows. I saw a single ash-throated flycatcher which was perched in a willow calling loudly. I collected this individual. I heard and saw several cowbirds, usually males perching at the tip-top of a tall willow cottonwood calling in their squeaky voice. I could not approach them close enough to shoot. I saw several fly overhead. I collected a female cactus woodpecker from a dead willow. I heard several linnets singing. Birds did not seem very common in this special place so I started up the road again. I hadn't got far when I saw a pair of ash-throated flycatchers in a willow near the road. I stopped the truck and collected them both. I continued up the road past the Saguaro belt to the first small lake by the side of the road. I frightened a pair of Am. egrets from the shore. At the upper end of the lake I frightened a pair of yellowlegs from the shore. Rough-wing swallows were flying over this lake. I collected a verdin in a mesquite near the lake and returned to the little pond below Potholes. As I drove past the pond a Florida gallinule flew up from the water and up above the tules and dropped down into them. I could distinctly see the red frontal plate. I also saw a pair of rails disappearing in the bushes along the shore. They appeared smaller than clapper rails. I did not see them distinctly enough for identification. I collected a female vermilion flycatcher that was fly catching from a telephone wire. On my way back to the ranch I frightened a roadrunner which flew across the big canal.

Mourning doves seem fairly common in this general locality. They can be heard cooing everywhere in the early morning and evening. I often see them flying overhead.

March 30, 1930

This morning I went up again to the small pond below Potholes. I found the rough-wing swallows here as yesterday circling over the pond catching insects. They appeared to be pairing or mating as occasionally I would see one pursue another uttering their rasping twittering call. I saw a coot in the upper end of the pond and another in the canal nearby. As I was watching the swallows a sharp-shinned hawk flew past rather high at a leisurely flight. I frightened a single Wilson snipe from the thick covering along the edge of the upper part of the pond. It jumped up and was gone like a shot. It flew

south at quite a high altitude leaving the vicinity of Potholes. Song sparrows were singing all around the pond in the quail brush and tules. I collected one specimen. I heard the calling of rails several times but saw none. I then went up beyond Potholes about a mile and turned off the road towards the river and came to a long shallow lake bordered with willows and cottonwoods and arrowweed and with a dense growth of tule in the middle. Upon arriving at the lake I frightened many Farallon cormorants which took flight. I also aroused about a dozen or more American egrets. Coots were common on the lake and I saw several ducks but could not get near enough to identify them. I made out a pair of teal of some species. I saw a single great blue heron. I saw a least sandpiper and flushed a small flock of large sandpipers at quite a distance. All the water birds on the lake seemed very wary and took flight at the slightest provocation. There were about fifty more or less white pelicans on the lake. Along the shore of the lake among the willows, cottonwood and arrowweed found vermilion flycatchers to be numerous and in pairs. I collected a male specimen. Gila woodpeckers were common in the willows in this locality, all in pairs. I collected a female. I also collected a female cactus woodpecker from a pair I saw in a willow tree. I saw a small flock of chipping sparrows of about a dozen individuals flying about in the willows. I secured two specimens. I collected a Bullock oriole (male) from a willow close to the water's edge. I saw no others. A male cowbird was seen and heard calling from the top of a large willow but was unable to get within shooting range of it. A black flicker was flying above the water's edge.

Returning to the ranch I collected a single vireo from a mesquite near Potholes. I saw no others with it. Near the dam I saw two others fly into a blooming Palo Verde but before I could get the gun ready they had left. I saw an immature Gambel sparrow nearby.

March 31, 1930

This morning I drove down the road along the Cocopah canal a short distance where I stopped and hunted through the growth of quail brush, arrowweed and mesquite to the west of the canal. I observed a pair of cactus wrens perching on a telephone pole by the canal. The male was "singing". Gambel quail seemed abundant through this area. I saw many and could hear them calling at all times. One male was perching in the top of a quail bush calling. I saw a vireo in a clump of willows and soon collected it. I also collected a small Empidonax flycatcher in these willows but saw no more. Verdins were common here and were calling incessantly. I shot one and when I crawled into the thicket to pick it up and fix it, a crissal thrasher flew down into the tree not more than a yard

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away from me and scrutinized me curiously. I frightened it a short ways away and collected it. I saw an ash-throated flycatcher in a willow nearby. I was attracted by the nasal yaw calling of a gnatcatcher. I located him in a low willow and collected it. I went back to the road and walked down the road along the canal. I heard a thrasher singing in a willow thicket by the road. I started to stalk it but it flew. It was a crissal thrasher. Near a plowed field I saw approximately three dozen robins in a cottonwood tree. I saw a roadrunner in the field and frightened another across the canal a short distance away. In some low willows near the canal I saw 2 vermilion warblers. I collected one. I saw an Aberttowhee near here. I then went up to the little pond below Potholes. I approached very quietly so that I might see some rails or a gallinule. I was disappointed as far as rails were concerned but I got another glimpse of the Honda gallinule. I saw approximately a half dozen rough-wing swallows over the pond. I was interested in watching a pair of Say phoebes. They were perched on a telephone wire fly catching when one, presumably the female, lifted its head up, opened its mouth and uttered a squealing noise and fluttered its wings very much in the fashion of a baby bird begging food from its parent. The other bird however did not feed it. I later collected the female bird and the ovum was well developed. I observed three least sandpipers on the shore of the pond. I also saw two male Bullock orioles preening themselves on the opposite side of the pond. ~~xxxxxxx~~ As yet I have seen no female orioles. A sparrow hawk was seen perching on a telephone pole on a hill nearby. On the way back home I drove down through the willows and cottonwoods along the river bottom east of the Cocopah canal. I saw a pair of vireos in a little clump of willows near the railroad track and was able to collect one. Further down I saw an ash-throated flycatcher. In a clump of arrow weed I saw a male yellow-throat but could not get a good shot at it. I saw a pair of Empidonax flycatchers fly catching in the willows and collected one.

April 1, 1930

I remained on the ranch most of the day as I had some work to do and catch up on. This morning before breakfast I went down to the old ranch house east of our ranch where I saw several cottontails, mostly young ones. I saw a pair of cactus wrens in a mesquite near the old house. One of the wrens was perched near the top uttering its call. A pair of robins flew overhead towards the river.



This afternoon I went down to the pond just west of the ranch. Here I saw large numbers of redwings in the tules and on the ground near a corral by the pond. They were continually uttering their calling. I again saw the white-rumped shrike in this locality perching on a fence post. I also saw four western kingbirds in the vicinity of the ranch. Later in the afternoon I collected a male black-throated hummingbird which was flying about the flowers of the umbrella tree on the ranch yard. This evening I set out about thirty traps around the tule-bordered pond west of the ranch in hopes of catching some Sigmodons. While setting the traps a nighthawk flew about the pond catching insects. I also saw a couple small bats.

April 2, 1930

While on my way to get my traps at the pond a single robin flew past. I took 2 Sigmodons, 1 Mus musculus and Peromyscus from my traps. I made up only 1 Sigmodon. I frightened a great blue heron from the pond. I then went up to the little pond below Potholes where I collected a rough-wing swallow. There were several others about. Three ducks were flushed from the upper end of the pond but I was unable to identify them. Saw a yellow-throat near the pond and heard others singing. I then went up to the lake about a mile above Potholes. There I collected a Sora rail from some bench in the water on the shore. Coots were common in the lake. I collected a pipit from a small flock of about a half dozen which were on the mud shore. Another was collected from a flock of four which were in a plot of Bermuda grass away from the lake. I saw another flock of chipping sparrows in the willows and collected one. Also shot a Lincoln sparrow from several which were foraging in the willows. I collected a pileolated warbler which was flitting about in a willow. Near the water's edge I saw a couple small Vermivora? warblers flitting about in a low willow. I collected one. Vermilion flycatchers were seen several times. On the way back to the ranch I collected a Florida gallinule on the shore of the little pond below Potholes. It proved to be a male in breeding condition.

April 3, 1930

Today I again went up to the lake about a mile above Potholes. I observed a pair of pied-billed grebes swimming about and diving on the lake. I collected a Wilson snipe on the shore and later flushed another. A marsh hawk was seen flying about the lake. Warblers were quite common in the willows along the lake. Audubon warblers were very common. I collected 2 pileolated warblers and saw others. Also collected 2 vermilion

warblers and saw others. Yellow-throats were heard singing and calling quite frequently in the arrow weed thickets back from the lake and I was able to collect a pair. I saw numbers of chipping sparrows, one large flock in particular, and collected three specimens. I collected a black phoebe which was fly catching on the shore and saw another later. Saw a single western kingbird perching in the top of a willow and collected it. I saw a few ruby-crowned kinglets in the willows and collected one. Saw a single ash-throated flycatcher near the lake and a pair near Potholes on my way to the ranch. Saw some robins in the trees about the house this afternoon. While at the lake I collected a vireo and saw another in a willow.

April 4, 1930

I went to the willow area east of the Cocopah canal but saw few birds. Audubon warblers were most common. Saw several Gambel quail in the arrow weed-quail bush and heard others. I saw a crissal thrasher perched in a low willow, singing; also heard another. I collected a verdin in a mesquite bush. Saw a cactus woodpecker which was perched on the limbs of a cottonwood.

When I went up to the pond below Potholes. Observed the usual coots, a pair of killdeer, a black phoebe, a female vermilion flycatcher and a few rough-wing swallows. I haven't been seeing as many of these swallows about here of late.

At the lake about a mile above Potholes I saw a single Sora rail run into some bush on the shore. I saw a number of pileolated warblers in the willows and collected one. I also collected a vireo from a willow. Yellow-throats could be heard singing and calling and I saw several.

This afternoon I saw a cactus wren about the doorstep of the house picking up feathers presumably for the lining of its nest.

April 5. 1930

I hunted in the vicinity of the lake this morning. I collected a single black-throated gray warbler from a willow near the lake. I saw no others. Pileolated warblers were commonly seen in the willows. I collected four. Audubon warblers were also common in the willows. I collected a single Vermivora warbler from a willow near the shore. I saw several vireos and collected one. Chipping sparrows were seen in small flocks throughout the willows. I flushed a

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small flock of about 6 Savannah sparrows from the ground and collected one. Cowbirds are quite common about the lake. I often saw a male perched on the top of a dead tree calling. A huge flock flew over. I saw 3 robins fly past over the willows. I saw other pied-billed grebes on the lake. A pair of great blue herons were flying over the lake and a single adult black-crowned night heron flew past me over the willows. I saw a single raven flying as I went up to the lake this morning; it was near the ranch.

April 6, 1930

I went up to the lake this morning for a short hunt. On the way I stopped and hunted in the quail bush area west of the Cocopah canal. Saw several and heard more Gambel quail. Two roadrunners were seen. A small flock of cowbirds were flying swiftly about from tree to tree never staying long in one tree. The flock was mixed. I saw a single crissal thrasher in the quail brush. I observed a single pileolated warbler flitting around in a willow clump. Verdins were commonly seen here.

At the lake birds were not so plentiful in the willows. I saw and heard a few yellowthroats. I collected 2 pileolated warblers and saw a few more. Several small flocks of chipping sparrows were seen and 2 collected. Audubon warblers were common in the willows. I saw a pair of red-shafted flickers in a dead willow which flew before I could get in gun range. I saw several cowbirds and collected a male. A few ash-throated flycatchers were seen. This evening I heard ravens calling over the ranch.

April 7

I hunted along the lake above Potholes again this morning. The small birds did not seem so abundant about the lake this morning. I collected a single Empidonax flycatcher from a willow and saw no others. I saw several pileolated warblers and was able to collect two. I also saw a few warbling vireos. Cowbirds were commonly seen perched on the tops of dead trees. I saw on a few occasions 2 males and one female cowbird perched close together. I saw and heard a number of ash-throated flycatchers amongst the willows and collected one male. Chipping sparrows were common in the willows in small flocks. I saw a small flock of pipits feeding on a grassy meadow. I frequently saw doves (mourning) fly past. A single sharp-shinned hawk flew past close to the lake on one occasion. I collected four chipping sparrows. I saw a single spotted? sandpiper along the muddy shore of the lake. I went down to the willow area near Potholes above the dam and made a short hunt. I saw only a few Audubon warblers and a male cactus woodpecker on the trunk of a willow.

April 8, 1930

Today I worked in the desert wash area about three miles north of Potholes. I hunted towards the hills west of the road. On the way up I saw a Gambel sparrow and 2 rough-wing swallows were perching on a wire near the canal and I collected both. At the desert wash I saw a male phainopepla perched in the top of a tall mesquite. I also saw a small flock of Gambel sparrows in the low bushes and collected an immature bird. Farther up the wash among the larger palo verdes, etc. birds were more abundant. Here I collected a male house finch and another immature Gambel sparrow from a small flock that were feeding in a palo verde. I collected both birds with one shot. I observed a single pileolated warbler in a palo verde and immediately collected it. I collected a male phainopepla from the top of a dead mesquite where it was calling. Its gullet and crop was filled with soft red berries which I saw growing on few green bushes. Ash-throated flycatchers were plentiful here and in pairs. I saw a single male Bullock oriole fly into a large palo verde where I collected it after a short stalk and saw several Calaveras warblers in the palo verdes and collected 2 males. I saw an Empidonax flycatcher but couldn't get it. Verdins were common and I collected one. I walked past several large Saguaros on the north side of the wash but saw no birds. Every one of the giant cactuses were punctured with one or more woodpecker holes.

April 9

I again hunted in the desert wash area about 3 miles north of Potholes. Empidonax flycatchers were quite common on this wash and could be heard calling often. I collected 3 and saw a number of others. In the upper part of the wash I flushed a horned owl from a palo verde. It flew out of sight up the wash and I was unable to see it again. I collected a Lucy's warbler from a palo verde. I saw and collected a single pileolated warbler from a low mesquite. I saw a pair of plumbeous gnatcatchers flitting about in a palo verde and collected both. I saw a number of pairs of phainopeplas and ash-throated flycatchers. A small flock of Gambel quail were flushed.

Returning to the car I flushed a nighthawk which I collected as it circled over me. I saw 2 Bullock orioles, males, fly past.

This evening at dusk I saw about 15 nighthawks fly past the house flying in a southerly direction catching insects as they flew.

April 10, 1930

Today I hunted along the lake about a mile north of Potholes. I collected a male yellow warbler from a small flock of warblers feeding in the top of a willow. Also collected 2 pileolated warblers and saw others. I saw large numbers of cowbirds and collected one male which was perching in the top of a dead willow. I saw a spotted sandpiper on the mud shore but could not get in range to collect it. I saw a single Lincoln sparrow hopping over some fallen logs and collected it. There was a large flock of white pelicans on the lake. also saw several black-crowned night herons, great blue herons and egrets. Audubon warblers were seen and one collected. A single male Bullock oriole was seen in a willow near the water's edge. At the upper end of the lake I flushed about 50 white pelicans. Egrets were numerous there.

April 11

The weather was very warm and close and cloudy in the afternoon. I collected in the desert wash area about 3 miles north of Potholes this morning. On the way up I saw a single kingfisher perching on a telephone pole by the small pond below Potholes. At the wash I saw several pairs of phainopeplas and collected one male. I saw a few Calaveras warblers in the palo verdes and ironwood and collected one. I saw a single pileolated warbler and collected it. Several chipping sparrows were seen and three shot. A couple Brewer sparrows flew into a dead tree and I was able to collect one. Verdins were seen often and one collected. I saw a number of ash-throated flycatchers. I heard Empidonax flycatchers calling on several occasions and collected one. I collected a single vireo from an ironwood tree and saw no others. While I was hunting in the wash a flock of about 30 white pelicans flew over and circled around a number of times.

This evening I saw about 6 nighthawks fly past the house.

April 12

This morning I hunted in the desert wash area 3 miles north of Potholes. On the way the belted kingfisher was seen at the little pond below Potholes. Four cinnamon teal were seen on the pond, one male in the breeding plumage.

At the wash I saw a small flock of warblers in a palo verde and collected a Vermivora warbler from them. I collected a vireo close by and later collected another I saw a few Calaveras warblers and was able to collect one. Empidonax flycatchers were often seen and 3 collected. I saw a pair of plumbeous gnatcatchers in a mesquite and collected both. The male was badly shot up and so not saved. I saw several chipping sparrows and shot one. Near the Saguaro cactus on the north side of the wash I flushed a pair of nighthawks

from the bare rocky ground. I was able to collect one. The palo verdes are now in full bloom here.

This afternoon a pair of cinnamon teal were seen in the drainage canal south of the house and the male was collected. Near the ranch an Arkansas kingbird and a white-rump shrike were collected.

At the wash this morning I again saw a flock of about 50 white pelicans circling overhead.

The Gila woodpeckers at the ranch were first noted to be feeding. One would feed the babies and wait til the other returned with food then it would go out for food.

April 13. 1930

The weather was cloudy today with a light rain in the afternoon. I worked at the ranch today, preparing specimens and doing other odd jobs. This morning a black-throated gray warbler and a warbling vireo were collected from the trees in the front yard. A Bullock oriole male was seen in the cottonwoods and heard calling. At the drainage canal south of the farm a pair of killdeer were collected from the shore. A male phainopepla was noted in a mesquite tree on the ranch immediately east.

April 14

This morning Safford and I took the boat up to the lake about a mile above Potholes. Upon arriving at the lake we aroused about a dozen American egrets from the shore. About 50 white pelicans flew up from the lake. While on the lake we collected 2 spotted sandpipers from the shore. A large flock of least sandpipers and 3 yellowlegs were seen on the shore but could not be approached. A marsh hawk was seen sailing over the tules. A number of great blue herons were also seen. Pileolated warblers were common in the willows along the shore and four were collected. A single male ruby-crowned kinglet was seen and collected from a willow. Gila woodpeckers were seen and one adult male collected. A chipping sparrow was collected from a small flock in the willows. A single male Bullock oriole was seen and collected. A western kingbird was seen in the vicinity and vermilion flycatchers were common in pairs. Upon skinning a Say phoebe was collected from a wire near the pond below Potholes. I saw no others. 4 cinnamon teal were flushed from the pond, one a male in breeding plumage. The belted kingfisher was also observed at the pond. I saw quite a number of turkey vultures soaring over the area traversed today and near the ranch.

April 15, 1930

Early this morning a flock of Brewer blackbirds were seen in a cultivated field close to the ranch.

Today I hunted in the desert wash area about 3 miles north of Potholes. This was a clear warm day and little of importance was seen. Several pairs of phainopeplas were seen and a female collected. A kingbird was collected in the same tree from a pair which were perched there. Several Empidonax were seen and 2 collected. A female house finch was taken in an ironwood and a male seen in the same tree. One chipping sparrow was taken and others seen. A Vermivora warbler was also collected from a palo verde. Two black-headed grosbeaks were seen but could not be collected as they were extremely wary.

Later in the afternoon Safford saw a ground dove feeding under a mesquite near the main canal.

April 16

This was a windy day and rather cool. I hunted in the desert wash area north of the main canal about a mile n.w. of the ranch.

Many warblers were seen today among the palo verdes. I collected 3 Vermivora (orange-crowned) warblers, a yellow warbler, a Calaveras warbler, 2 black-throated gray warblers and a Tolmiei warbler. All of these warblers were collected from palo verde trees where they were feeding. About 20 immature black-crowned night herons were flushed from the bank of the main canal near a small pond.

At the drainage slough about a half mile west of the ranch, Safford saw a number of great blue herons, a little green heron, 3 cinnamon teal and a Wilson snipe.

April 17

This morning was bright and clear and quite warm. I went to the desert wash region north of the main canal and about a mile n.w. of the ranch. Warblers were quite common today. Three orange-crowned Vermivora warblers were collected. Also a Lucy warbler which was singing in a large palo verde was collected. A female cowbird was taken from a large ironwood in the wash. A female Bullock was seen for the first time this season and was collected. A male Gambel sparrow in good plumage was collected.

The first part of the afternoon we went to the drainage slough about a half mile west of the ranch. Here we saw an immature black-crowned night heron and a green heron. The green heron was collected.

April 18, 1930

The weather was warm and clear today with no wind. Today I hunted in the desert wash about 3 miles north of Potholes. Generally speaking birds did not seem very abundant in this area. I collected a male lazuli bunting from a palo verde and saw no others. A female Tolmiei warbler was collected from a small flock of warblers which were feeding in a palo verde. Three Empidonax flycatchers were collected and others seen. An orange-crowned Vermivora warbler was collected from a small flock of warblers which were in a palo verde. A western kingbird and several pairs of ash-throated flycatchers were seen. Mourning doves were seen in pairs.

Returning to the ranch I stopped at the lake a mile above Potholes. Birds were quite scarce at that time of day (almost noon). I collected a pileolated warbler and an Empidonax flycatcher from the willows. A pair of cactus woodpeckers were seen in one willow.

April 19

This morning I hunted in the desert wash north of the main canal about a mile northeast of the ranch. The weather was quite hot. A pair of mockingbirds were seen in and about the palo verdes and mesquites in the wash. They could be heard singing. A flock of Zonotrichia were seen feeding on the ground close to some low bushes. I shot 2 with one shot and one proved to be a white-crowned sparrow; the other was a Gambels. A few phainopeplas were seen. A small flock of Brewer sparrows were seen in the bushes and one collected. Birds did not seem very abundant in the wash today. A few pileolated warblers were seen in the willows near the main canal.

This afternoon a western kingbird and a white-rumped shrike were collected on the ranch.

April 20

Today I remained about the ranch all day. The weather was very hot. In the afternoon a short walk was taken through the quail bush across the highway. Very few birds were seen.



April 21, 1930

This morning I hunted along the lake a mile above Potholes. Almost upon arriving there I heard the calling of a Cooper tanager and soon spied a brilliant male in a willow. Its song resembled that of a grosbeak. It flew before I could get in range. Later I saw another or the same one in the willows farther up the lake and was successful in collecting it. Pileolated warblers were common in the willows and three were collected. Yellow warblers were heard singing in the willows and one was collected. An Empidonax was collected in the willows. Vermilion flycatchers were common in pairs along the lake and a female was collected. A western kingbird was collected and others seen.

At the little pond below Potholes a single sora rail was seen on the muddy shore.

Mr. Huey arrived this afternoon for a week's stay.

April 22

This morning Huey and I hunted in the willows a short distance above Potholes. I saw several male Cooper tanagers in the willows and one female. They were heard calling and singing. I collected a single Audubon (?) warbler from a willow. Its throat was quite white. I saw a small female hummingbird and collected it. Several Bullock orioles were seen and heard calling in the trees. I heard calling and singing and saw a number of long-tailed chats in the arrow weed thickets amongst the willows. I would often see one chasing another and presume they were breeding. I saw one bright colored individual perched in a branch of a willow singing. I collected a male vermilion flycatcher which was perching in the top of a willow. A warbling vireo was collected. I also collected an Empidonax flycatcher.

At the small pond below Potholes a small flock of least sandpipers were seen and one collected by Mr. Huey. Yellow-throats were often heard singing in the tules but they were quite wary and stayed out of sight.

April 23

The area along the lake about a mile north of Potholes was hunted by Huey and I this morning. On the way up we saw a raven flying about a half mile east of the ranch. At the small pond below Potholes we saw 2 Florida gallinules swimming in different parts of the pond. In the willows along the lake birds did not seem very plentiful as a whole. Long-tailed

chats were quite common among the arrow weed and could be heard singing at all times. Several pileolated warblers were seen in the willows and 2 collected. A chat was also collected from a willow. Yellow warblers were often heard singing in the willows and 2 were collected. An incubating female song sparrow was collected from a small willow. No nest could be found nearby. A pair of Vermivora warblers (orange crowned) were seen flitting about in a small mesquite and one was collected. I again heard the cry of the Harris hawk and soon found him perching in the top of a dead cottonwood not far from the lake. As I approached he flew but returned shortly to the same perch. On and along the shore of the lake I saw the following birds - a large flock of about 50 white pelicans which were fishing, several great blue herons, a few immature black-crowned night herons, about 4 green herons, a flock of about 40 sandpipers, possibly solitary, coots, a few grackles.

At the upper end of the lake I flushed a horned owl from the willows.

This evening about sundown we heard the calling of geese and saw a flock of about a thousand snow geese flying at a high altitude north in one large V shape formation and a few smaller files.

This evening 2 poorwills were shot on the road north of the main canal between the Exp. farm and bridge and others seen. One also seen on ranch.

April 24, 1930

This morning Huey and I hunted in the desert wash area north of the main canal and east of the Experiment. farm. Gambel quail were often seen in pairs and were heard calling. A single male black-headed grosbeak was seen flying down the wash. Mourning doves were very common throughout the wash in pairs. A single green-tailed towhee was seen in a palo verde and collected. A few Brewer sparrows were seen and one collected. Bullock orioles were very common in the palo verdes. Two males were collected, one male in first year plumage though was a breeding bird. Two gray fly-catchers were seen and one collected. An Empidonax difficilis was collected from a willow close to the main canal. A few warblers were seen in the willows near the canal and a pileolated warbler collected. Several cowbirds were seen and three collected from a dead cottonwood.

There was a rather strong east wind today. This evening 2 poorwills were collected on the road north of the main

canal and several seen. A number of nighthawks were seen. While up in the desert wash this evening at dusk a number of bats were seen flying down the wash and a *Pipistrellus* was collected. This afternoon Huey saw a yellow-headed blackbird in the ranch yard.

April 25, 1930

Weather cooler today and clear. This morning Huey and I collected in the desert wash north of the main canal about a half mile west of the Exp. Farm. Warblers and *Empidonax* appeared to be abundant in the mesquite and palo verdes. All of my collecting this morning was done in the row of tamarisks and mesquite and palo verde nearby. Western flycatchers were very common and 6 were shot. I was fortunate in collecting an olive-sided flycatcher which I saw perched in the top of a dead tree close to a mesquite. I saw no others. Gambel quail were very common and could be heard calling frequently. Mourning doves were commonly seen. Of the warblers collected one pileolated warbler, 3 Calaveras warblers and 3 orange-crowned *Vermivora* warblers. Many others of these warblers were seen. I collected a warbling vireo from a mesquite. A pair of Abert's towhees were seen in the mesquite. Also a pair of cactus wrens were seen in the vicinity. A few turkey vultures were flying overhead. Three green-backed goldfinches were seen along the main canal below Potholes.

April 26

This morning I hunted along the lake a mile north of Potholes. Pileolated warblers were common in the willows, 3 being shot. A few western flycatchers were also seen. Long-tailed chats were often heard singing in the arrow weed thickets. A sharp-shinned hawk was seen flying near the lake shore. A number of egrets were seen on the lake. Also were a number of great blue herons, cormorants and coots. A single pied-billed grebe was seen near shore. A large flock of white pelicans were seen feeding on the lake. A couple large flocks of least sandpipers were seen feeding on the mud shore and 2 collected. Also 2 spotted sandpipers were seen. There were several killdeer along the shore which called loudly as I walked along the shore. One bird mimicked a broken wing.

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At the upper end of the lake I saw 3 rough-winged swallows flying about over the willows and occasionally resting in the tops of dead willows. I collected one breeding male. Yellow warblers were heard singing in the willows. A warbling vireo was seen and collected in a willow.

A raven was seen flying over the lake.

April 27, 1930

Today I remained about the house catching up on a lot of necessary work. This afternoon I went down to the drainage ditch south of the ranch. Here I saw 6 American egrets standing on the tops of the dirt piles along the ditch. They took flight as I approached and flew down the ditch where they alighted again. A killdeer was calling by the side of the water.

April 28

Weather clear and warm with wind in late afternoon. Today I hunted in the desert wash area north of the main canal and about a half mile to a mile west of Exp. Farm.

Mourning doves and Gambel quail were common everywhere. Brewer sparrows were seen in good-sized flocks on several occasions in the low bushes of the washes and 5 specimens were collected. Ash-throated flycatchers were often seen in pairs. Cowbirds were often heard and seen. Empidonax flycatchers seemed fairly common throughout the washes. Two were collected from palo verdes in the upper part of the wash and a western flycatcher was collected from a willow near the main canal. Warblers seemed fairly common in the palo verdes and mesquites. A number of pileolated warblers and few orange-crowned Vermivora were seen about the tall tamarisks in the lower part of the wash. One pileolated warbler was shot but was too badly shot for a specimen. A Tolmiei warbler was collected here also. Another Tolmiei warbler was collected in the upper part of the wash from a palo verde and others seen. Two yellow warblers were collected from the palo verdes where they were feeding. A single black-throated gray warbler was seen feeding in the creosote in the upper part of the wash and was taken. A pair of western mockingbirds were observed in the upper part of the wash. A sharp-shinned hawk was flushed near here. A warbling vireo was seen and collected. A long-tailed chat was heard singing and seen in the thick brush and mesquites in the

large wash. A cactus wren's nest was found in a palo verde about 12 ft from the ground. One of the birds was seen close to the nest.

April 29, 1930

Weather cooler with clouds in morning and wind in late afternoon. This morning I hunted in the willows a short distance above Potholes. Cooper tanagers were very common and were heard calling and singing at all times. Both sexes were seen. 3 males and 1 female were collected. Yellow warblers were common in the tops of the willows and were often heard singing. Four specimens were taken. Pileolated warblers were also commonly seen in the willows and 3 were taken. Long-tailed chats could be heard calling and singing in the thickets of arrow weed and willow and one male was collected. A single wood pewee was seen perching in the top of a dead willow and was collected. A few Gila woodpeckers were seen and often heard. A few warbling vireos were seen in the willows. Bullock orioles were often seen and heard calling. I saw a number of cowbirds perching in the willow tops and calling. Several western flycatchers were seen and a couple shot. A few great blue herons and a cormorant were seen flying overhead up the river. Also a turkey vulture was seen. Song sparrows were often heard singing. A single roadrunner was seen running in front of me through the dense willows. It seemed rather out of place here. I was fortunate in seeing a male blue grosbeak. It flew into a willow from the arrow weed bordering a corral. While trying to get in range of it the bird flew away into the willows and was not seen again. A little south of Potholes I saw 3 green-backed goldfinches in the low bush at side of the road. This afternoon Coole collected a Sora rail near a water ditch just north of the ranch. He also collected a nighthawk which he flushed from the ground in a desert wash of the main canal.

April 30

Weather cool and cloudy. This morning I collected in the desert wash area north of the main canal. Warblers were quite common in the palo verdes. Four pileolated warblers were shot and others seen. A number of Tolmiei warblers were seen and 2 collected. Two orange-crowned Vermivora warblers were collected from palo verdes and others seen. A wood pewee was collected from the top of a dead tree where it was seen fly catching. Yellow warblers were seen on several occasions in the palo verdes and 2 collected. A pair of

western tanagers were seen in the palo verdes and ironwoods in the upper part of the wash but were very wary and I was unable to get a shot at them. Empidonax flycatchers were seen everywhere.

This evening on my way to Yuma I saw 2 ground doves on the road about 2 miles above Yuma.

May 1, 1930

Weather cool, cloudy and windy in afternoon. This morning I hunted along the lake in the willows a mile above Potholes. Pileolated warblers were fairly common in the willows and 3 were shot. A few yellow warblers were seen and heard singing. One was collected near the lake. A few Cooper tanagers were seen and others heard singing. Bullocks orioles were also seen in the willows in pairs. A few wood pewees were seen fly catching in the willows and one was taken. Myiarchus magister were seen in the top of a large willow and after a long chase I was able to collect one of the birds which proved to be a male. Their call note was a "toowit" which they uttered quite often. They were very wary and kept out of my sight so that I was able to follow them only by learning the call. Along the road below Potholes a short distance, a white-winged dove flew past the car. It was the first one I have seen this season. Before returning to the ranch I stopped in the willow area east of the Cocopah canal. I saw a cactus woodpecker in a large cottonwood. I collected a yellow warbler and saw others. I also shot a warbling vireo from the top of a willow. At the ranch I collected a blue grosbeak, male, from the grass in front of the house. I heard another call nearby.

This evening Huey and Sefton arrived in airplane from San Diego.

May 2

Weather cool and cloudy with some rain and a south wind. This morning I hunted for a short while in the desert wash north of the main canal. Brewer sparrows were seen in a large flock in the low bushes also saw a number of Zonotrichia leucophrys subs. A single black-throated gray warbler was collected from a mesquite and another seen. A number of pileolated warblers were seen and one collected. Two white-winged doves were seen and both flushed from ironwoods. The mockingbirds in the upper part of the wash were singing loudly. A female yellow warbler was taken from a large palo

verde. I also collected a green-tailed towhee from a palo verde. A large number of Vaux swifts were seen flying along the main canal and over the ranch house.

Huey reported seeing 2 white-winged doves near the Exp. Farm at Bard.

May 1, 1930 L.M. Huey

Drove to Yuma after dark - saw 3 barn owls enroute, 1 at ranch - 1 near Exp. Farm and 1 near Indian Hill.

May 2 L.M.H.

Brisk s.-w. wind, cool and cloudy. Saw many Vaux swifts flying over ranch about 8 a.m. 4 American egrets were playing aerial scullies over the drainage canal.

May 3

Several Vaux swifts were seen flying over the house about noon today. The weather was cool and clear in the morning but clouding up in the afternoon. A ground dove was flushed from the road about 2 miles above Yuma. A flicker was seen on a telephone pole about 3 miles above Yuma this evening. Western kingbirds and shrikes were often seen on the fences along the road between the ranch and Yuma. A few cliff swallows were seen flying near the road about 2 miles above Yuma.

May 4

Weather cool and quite windy. This morning I went up to the desert wash about 3 mi north of Potholes. Few birds were seen due to the strong west wind. A few western flycatchers were seen and one taken. A white-crowned sparrow was collected. A warbling vireo was also taken from a palo verde. Returning to the ranch a vireo was collected from a mesquite at the side of the road about a mile north of Potholes.

May 5, 1930

Weather warmer and partly cloudy with a strong wind in afternoon. This morning I went up to Potholes. On the way I collected 2 Vaux swifts from several which were flying about near the canal below Potholes. In the willows above Potholes a short distance I saw several Cooper tanagers males and females. Pileolated warblers were common and one was collected. I saw a number of Empidonax flycatchers and collected 2 of the species and one of another. Also 2 western flycatchers were shot. A roadrunner was flushed from a nest in the willows about 12 ft from the ground. It contained 3 white eggs.

At the lake a mile above Potholes I saw large numbers of Vaux swifts and rough-wing swallows flying about the lake and dipping over the water. One barn swallow was seen. I collected 3 Vaux swifts and 2 rough-wing swallows.

I then went up to the desert wash about 3 miles north of Potholes. I saw a single white-wing dove. Also saw several white crowned sparrows and collected one. A male western tanager was seen and collected. A small flock of green-back goldfinches were flushed from small bushes and 1 collected.

May 6

Weather clear and cool with a west wind. This morning I hunted along the lake a mile north of Potholes. Here Vaux swifts were flying over the shoreline in large numbers. With them were numbers of cliff swallows and a few rough-winged swallows. I collected 2 Vaux swifts and 1 cliff swallow. Pileolated warblers were fairly common in the willows. Two Empidonax sp. flycatchers were collected. A flock of about 50 western sandpipers were feeding on the muddy shore of the lake and I was fortunate in getting seven of their number. A green heron was flushed from the shore.

May 7

Weather cool and with a very strong west wind all day. This morning I hunted in the desert wash north of the main canal. I saw a russet-backed thrush on the ground of the ranch yard this morning early but it flew before I could get the gun. In the wash pileolated warblers were common everywhere. Three black-throated song warblers were seen and one collected. Western tanagers were quite common in



the upper part of the wash and 2 were collected, a male and a female. Lazuli buntings were seen on several occasions in small flocks and a male was taken. A single russet-backed thrush was collected from the lower branches of an ironwood in the upper part of the wash. A female black-headed grosbeak was also collected. In the upper part of wash an egg was found on the ground in the middle of a small wash. The egg was in no nest whatsoever and was sitting close to the edge of a small bank. There were desert shrubs close by but I could discover no nest in them. Close to the egg was another malformed egg. This egg had been laid when the shell was soft and was now dried and mishappen; its color was white. A white-crowned sparrow was flushed from the brush. In the far upper part of the wash I saw a pair of large swifts which appeared to be white-throated swifts. They were flying overhead and flew out of sight up the wash after an unsuccessful attempt to shoot one.

May 8, 1930

Weather cloudy, cool with brisk west wind. This morning I hunted in the willow tract a short distance above Potholes and along the lake a mile above. On the way up I noticed several Vaux swifts flying over the small pond below Potholes. In the willows above Potholes I saw a number of yellow warblers in the tops of the trees. Pileolated warblers were noticed as fairly common. Several wood pewees were seen. Two western flycatchers were collected and others noted. While hunting in the willows I was fortunate in seeing a black swift sailing overhead. It flew just above the tops of the willows on one occasion and I am very sure of the identification. Rough-wing swallows were flying nearby. A pair of green-back goldfinches were seen flying.

At arriving at the lake I saw 2 snowy egrets fishing close to the shore. An American egret was standing close by and comparison was easy. Vaux swifts and rough-wing swallows were abundant out over the lake where they flew quite low catching insects. I collected 2 Vaux swifts and 2 rough-wing swallows. A number of white pelicans and egrets were noted on the lake. A few great blue herons were also seen. I observed for some time a black tern diving for fish in the lake near the tules. It flew up and down the lake hovering here and there and diving preferring to fish along the edge of the tules and not coming near the shore. A female Cooper tanager was collected near the lake. This evening several blue grosbeaks were seen near the Nordahl farm in grain field.

May 9, 1930

Warm and clear. This morning I hunted in the willows above Potholes and along the lake a mile above. On the way up I saw an immature red-tailed hawk perching on the top of a telephone pole near the Potholes school house. It did not fly at the approach of the car and I stopped and watched it for a minute at close range. Near the corral above Potholes I saw a male blue grosbeak perching on the top of an arrow weed singing. A single Calaveras warbler was collected in the arrow weed close by. I saw nothing else unusual in this locality. Numbers of Cooper tanagers were seen. Song sparrows were heard singing as also were long-tailed chats. Warbling vireos were common in the upper parts of the willows.

At the lake Vaux swifts and rough-wing swallows were abundant flying over the water. They were flying much higher today and I found it necessary to use heavier load to collect 4 Vaux swifts. Four russet-back thrashers were seen in different places along the lake and one was taken. A small Empidonax flycatcher was collected. On the lake numbers of coots were seen and 2 red-billed grebes noted.

A green heron was observed as were several egrets, great blue herons and white pelicans. Several turkey buzzards were circling overhead. Cooper tanagers were seen in the willows along the lake. Several wood pewees were also seen. A spotted sandpiper was seen on the shore. This evening at dusk I saw a small flock of avocets feeding in a small pond by the side of highway 80 about 2 miles west of Yuma. A large flock of blue grosbeaks were seen about Nordahl's grain field this evening.

May 10

Warm and clear. I hunted in the vicinity of lakes and ponds about a mile south of Bard. On the way western kingbirds were very common on the fences along the road. Red-wings were seen near the larger ditches. Meadowlarks were commonly seen. Near the drainage ditch by the Mason farm an immature black-crowned night heron was seen. Two cactus wrens were seen on fence posts at different places along the road.

In the vicinity of the lakes I heard a white-wing dove cooing from a large cottonwood and later I saw it fly. I walked around the larger of the two lakes. There were not many water birds on the lakes. On the larger lake I saw several coots, one pied-billed grebe and on the shore one American egret, a pair of killdeer, a great blue heron and a green heron. Pileolated warblers were fairly common

in the willows. A pair of yellowthroats were seen in the tules and others heard singing. Two immature black-crown night hawks were flushed from willow close to large lake. On the other side I saw a few coots swimming and a single pied-billed grebe was seen and collected. I saw numbers of yellow-headed blackbirds in the tules at this lake and collected one male. They were calling loudly. Numbers of redwings were also seen. I collected a single ground dove from the ground among the willows near the lake and heard another cooing nearby. A roadrunner was seen on the levee. A number of Cooper tanagers were seen in the vicinity of the lakes. Several mourning doves were seen. Gila woodpeckers were often heard calling and a few seen. A few Bullock orioles were seen about the cottonwoods. Also a few Abert towhees were seen. A white-rump shrike was seen flying across the road near the depot. Chats were heard calling in this area. A few song sparrows were seen above the lakes. Returning I saw two pair of western tanagers in the orchard of the Nordahl farm. This morning a white-wing dove was cooing in the large eucalyptus on the farmyard near chicken coop. It was later seen flying. Since May 4 pileolated warblers have been seen in the trees in the farmyard. A western flycatcher was seen in big tree late this afternoon.

May 11, 1930

Warm and clear. I hunted in the desert wash area north of the main canal this morning. Several russet-back thrashers were seen in the lower branches of the larger shrubs and one was collected. Two green-tailed towhees were collected.

Pileolated warblers were common and one Townsend warbler was seen and collected. A white-winged dove was collected in the upper part of the wash and another heard cooing. A number of Brewer sparrows were seen and two shot. A western flycatcher was taken and others seen. Several western tanagers were seen in the palo verdes in the upper part of the wash. Phainopeplas were commonly seen.

May 12

Weather clear and warm. This morning I hunted along the lakes about a mile north east of Yuma. On one of the larger lakes 2 Bonaparte ? gulls were seen and collected. One was swimming and the other flying. No others were seen. At the lower end of the lake a black-necked stilt and an avocet were seen wading in the shallow water. Both were collected. A pair of spotted sandpipers were seen feeding on the shore and the male was collected. It was in breeding condition. A small flock of the larger sandpipers such as western were collected at the lake above Potholes, were seen on the shore and were very noisy. A small flock of white pelicans were seen

on the lake fishing. A pair of Anthony green herons were seen fishing along the shore. Four cormorants were seen. A few night herons and a great blue heron were noted. A ground dove was seen near the lake and white-wing doves were heard calling. At Lake Hautelin in the early afternoon I saw an American egret, a great blue heron. A number of black-crowned night herons and an Anthony green heron, a pair of killdeer were seen.

In an alfalfa field about a mile north of the farm a pair of Gambel quail were flushed and a number of baby quail were found near the spot. They appeared to be quite young.

May 13, 1930

Warm and clear. The highest temperature today was 95°. This morning I hunted in the cultivated area about 3 miles north of Yuma on the Picacho road. In this area western kingbirds were very common along the road and about houses in the larger trees. A number of blue grosbeaks were seen about fields and 4 were collected, 3 males and 1 female. White-rump shrikes were fairly common and meadowlarks were often seen and heard singing everywhere. A few pairs of Gambel quail were seen. At one place 2 burrowing owls were perching on fence posts at the side of the road. One was collected. Later 2 others were seen at the same place. Two white-wing doves were seen flying and others heard calling. A single ground dove was flushed near the road. Two pair of Aberts towhees were seen. One pair near main canal and other near drainage ditch. A pair of mockingbirds were noted near an old cotton field. Redwings were commonly seen flying and near ditches. A few cactus wrens were seen and heard calling. A pair of Anthony green herons were seen along an irrigation ditch with standing water. Mourning doves were often seen. A few roadrunners were noted and one collected. Several Bullock orioles were noted in this area about dwellings. A single yellow warbler was seen and collected from the top of a willow near the main canal. Late this afternoon a ring-necked pheasant, male, was seen along the irrigation ditch north of the ranch. This afternoon a small flock of blue grosbeaks were seen about the maize pile near the chicken coop.

May 14

Weather warm and clear. This morning I hunted along the lake a mile above Potholes and in the latter part of the morning I went up to Calif. Lakes about 5 miles north of Potholes. At the lake little of importance was seen. On the

lake were the usual coots, a few cormorants, a small flock of white pelicans and a few blue herons and egrets. Two pair of killdeer were seen along the shore and were calling loudly. Mourning doves were occasionally flushed and seen flying. Pileolated warblers were common in willows and low bushes and yellow warblers were also seen. Red-wing blackbirds were noted in small numbers. A western kingbird was seen near the lake. A pair of *Myiarchus magister* were seen in the willows but were very wary. Several wood pewees were seen. A few Cooper tanagers were seen. On the way to Calif. Lakes a Cooper hawk was flushed at the side of the road about 3 miles north of Potholes. At the lake 2 Am. egrets were seen. Coots were numerous. A pair of spotted sandpipers were noted on the shore feeding. A great blue heron was also noted. In the willows near the lake a chat was collected. A pair of cactus woodpeckers were noted in a dead willow in a small burn. A pair of vermilion flycatchers were noted also. A pair of ash-throated flycatchers were also seen.

May 15, 1930

Weather warm and clear. This morning I hunted about the small lakes about a mile south of Bard and about the larger lakes about 2 miles north of Yuma. At the lakes south of Bard a mile little of importance was seen. On the lakes a few coots were seen and one pied-billed grebe. A great blue heron was seen flying. A small flock of yellow-headed blackbirds were seen and heard calling in the tules close to the lake. Numbers of redwings were also noted. A few white-wing doves were seen and heard calling. A female cactus woodpecker was seen in the large cottonwood. A few wood pewees were noted and pileolated warblers seemed fairly common in the bushes. A few Cooper tanagers were seen.

At the lake about a mile north east of Yuma little was seen. A small flock of white pelicans were seen swimming. Several spotted sandpipers were seen feeding along the shore and a great blue heron was seen.

At the Haughtelin about 2 miles north of Yuma, a black tern was collected. It was flying up and down the shore at the lower end catching fish. A pair of killdeer were seen and also a few spotted sandpipers. At a small pond adjacent to this lake a small cinnamon teal was seen on the water. Also a green heron, several black-crowned night herons and an Amer. egret. Two russet black thrushes were seen in the willows near the lake.

May 16, 1930

Warm and clear. This morning I hunted in the desert wash area north of the main canal. In the upper part of the wash western tanagers were abundant in the palo verdes and larger shrubs. Four were collected. Russet-back thrashers were also quite common and 2 were taken. Several male flocks of lazuli buntings were seen and flushed from low bushes. One male was collected. An adult red-tailed hawk was flushed from a clump of palo verdes and mesquite in the upper part of the wash. Later a horned owl was flushed from a palo verde. A number of linnets were seen and heard singing and one male was taken. Two single Talmiei warblers were seen in the low bushes in upper wash and both were collected. Pileolated warblers were also commonly seen. Phainopeplas were very common in upper part of wash and were flying everywhere. Several western flycatchers were noted. A western kingbird was seen in upper wash in palo verdes. A pair of white-wing doves were seen and heard calling.

This evening about 6 o'clock the trees on the ranch yard were "alive" with western tanagers of both sexes. A russet-back thrush was also seen in the fig tree.

May 17

Weather warm and clear. this morning I hunted in the quail brush area just west of the Cocopah canal and in the willows above Potholes. Little of importance was noted in the area west of the Cocopah canal. A yellow warbler was collected from a mesquite. A few quail were seen. Pileolated warblers were fairly common here and one was taken. Several Aberts towhees were noted. A warbling vireo was collected.

In the willows above Potholes birds were more plentiful. Pileolated warblers were common in the willows. Yellow warblers were also numerous in the upper branches of the willows and one was taken. A few Cooper tanagers were seen and heard calling. Several wood pewees were seen and one collected. Chats were often heard calling and one was taken. A Myiarchus magister was seen and heard calling in upper parts of some willows and was collected. It proved to be an incubating female. Two rough-wing swallows were seen flying overhead.

May 18

Warm and clear. This morning I worked in the desert wash area about 3 miles north of Potholes. On the way a red-tailed hawk, adult, was seen perching on the top of a telephone pole by the side of the road below Potholes. A sparrow hawk was also flushed from a pole farther up towards Potholes. At the

pond just below Potholes 2 adult Florida gallinules were seen swimming. The red frontal plate was plainly visible.

At the wash western tanagers were fairly common in the palo verdes and 2 were taken, a male and a female. Several yellow warblers were seen in the palo verdes and 3 were taken. An orange-crowned Vermivora was collected from a small flock of warblers that were seen in low bushes. While crossing a creosote covered flat I saw a single Townsend warbler in a small creosote bush and collected it. A number of verdins were seen and heard calling about the palo verde and an immature bird was taken.

This afternoon I noticed a female Bullock oriole eating from a green fig in the tree close to the house. Later I saw the male Gila woodpecker eating from the same fig and still later the male Bullock oriole picked on it a little.

May 19, 1930

Weather warm and clear. This morning I hunted about the lakes about 1 mile north of Yuma and around Lake Haughtelin. On the large lake about a mile north of Yuma little was seen. Two pairs of killdeer were seen and several spotted sandpipers noted. A small band of white pelicans were swimming and a single Farralon cormorant was seen on the lake. Three cormorants were seen flying over. Two ground doves were noted on the road near the lake. A great blue heron was flushed from the shore. An Empidonax sp. flycatcher was collected from the willows near the lakes.

At the lower end of Lake Haughtelin a pied-billed grebe was seen swimming near the tules and an unsuccessful attempt was made to shoot it. A few green herons were seen along the shore and several spotted sandpipers were noted along the shore and a pair of killdeer were calling loudly. At the little pond adjacent a female blue grosbeak was seen bathing in the shallow water. The male bird was near at hand. Two russet-back thrushes were seen in the willows near the lake.

At the upper end of Lake Haughtelin green herons were very common along the shore. Several spotted sandpipers were seen. A male cactus woodpecker was collected from a small willow which he was ascending with a beak full of insects. A gilded flicker, female, was collected from the water's edge where it had been drinking. A female cowbird was also collected from the muddy ground near the water. This evening I went down to the lower end of Lake Haughtelin with Cook. In a little grove of willows about dusk near the lake I saw a single Myiarchus magister perched in a willow. I collected this bird. A russet-back thrush was later collected from the small willows near the lake.

May 20, 1930

Weather very warm and clear. The highest temperature this afternoon was 100°F.

This morning I hunted in the willows just above Pot-holes. Nothing out of the ordinary was noted. Long-tailed chats were often heard calling and a few seen. One male was collected from a willow. A number of yellow warblers were seen in the tops of the willows and one female was taken. A pileolated warbler was shot out of the top of a high willow and others were seen. Several cowbirds were seen in the willows. An ash-throated flycatcher was also collected. A few russet-back thrushes were seen in the willows and one taken. A warbling vireo was collected and others seen.

May 21

Weather hot and clear. This morning I drove down the main canal to the Picacho bridge and back. Numbers of pairs of Gambel quail were seen along the canal. Redwings were also common. I also saw numbers of Abert's towhees. At a pool near the canal I saw an immature black-crowned night heron and an Anthony green heron. Several ground doves were seen on the banks along the canal.

I then went up to the desert wash north of the main canal and about a  $\frac{1}{2}$  mile west of the Exp. Farm. A number of western tanagers were seen but were not abundant. A few russet-back thrushes were also seen. A single Tolmiei warbler was seen and collected from low bushes. Several pileolated warblers were seen and one taken. A warbling vireo was also taken. A nighthawk was flushed in a rocky portion of the wash and was collected. Several pairs of Gambel quail were seen and a male specimen taken. In the lower part of the wash a flock of baby quail were seen. They were able to fly fairly well but were still quite small. Near the canal below the Exp. Farm a larger flock of half grown quail were flushed. A few kingbirds were seen in the wash, a pair being near the tamarisks. Phainopeplas were common. A single road-runner was seen in upper part of wash. A mourning dove's nest was found in upper part of wash in a small ironwood. The nest was quite flimsy with a number sticks on the ground. Eggs could be seen through the nest.



May 22, 1930

Weather clear and with a strong north wind. Today I went up to the lake about a mile north of Potholes where I hunted. Collecting was poor because of the strong wind. I saw a number of *Empidonax* sp. and collected 3. A single female lazuli bunting was taken from a willow. A yellow warbler was taken from a mesquite where it was feeding. Others were seen in willows. Several rough-wing swallows were seen about the lake and one was shot. A single Townsend warbler was seen in a willow for an instant but was soon lost in the wind-blown willows. A few pileolated warblers were noted. On the lake few coots were seen. A small flock of Am. egrets were also noted. The usual red-wings were seen.

On the ranch this afternoon I collected a male redwing and a cowbird from a cotton wood. Both had been eating maize. I saw a female western tanager in tree also.

May 23

Weather hot and clear. Highest temperature 100° F. This morning I went down to the lake below Bard about a mile. Little of importance was seen. A few yellow-headed blackbirds were seen and heard calling in the tules. Red-wings were common. A few coots were seen at the upper end of one lake and several juv. coots were seen with an adult. A pair of Florida gallinules were also observed swimming and feeding on the shore. A few green herons were seen and an Am. egret. An adult black-crowned night heron was seen to fly into a large patch of tules. A great blue heron was also noted. A spotted sandpiper was flushed from shore. A pair of killdeer were calling loudly on the shore. Very little was seen in the willows about the lake. A few pileolated warblers were noted.

I then went up to the willow area north of Potholes. Here I collected a male Cooper tanager. A few *Empidonax* sp. were seen and one taken. Two warbling vireos were collected from willows. A few yellow warblers were seen in the higher parts of the willows and one taken. A few chats were heard and seen.

May 24

Weather hot and clear. Highest temp. 100° F. This morning I hunted in the desert wash area north of the main canal. Not a large variety of species were noted. Phainopeplas were common there being many immature birds on wing. One immature specimen was taken. Several western tanagers were seen and a male was taken. Two pairs of white-wing doves were seen and heard calling. Mourning doves were fairly common and 2 were seen on nests, one having eggs. A small

female lazuli bunting was shot but was not prepared as the throat slipped before skinning. Several Bullock orioles were seen and heard and a male was taken. The pair of western kingbirds were noted in lower part of wash. A few Abert's towhees were seen about the mesquites in lower wash. A crissal thrasher was seen flying from road below Exp. Farm. A pair of cactus wrens were seen about the tall tamarisks. A small flock of white pelicans were seen flying high over wash.

May 25, 1930

Weather warm and clear. This morning I hunted along the lake about a mile above Potholes. Little of importance was seen. Yellow warblers were common in the willows and 5 were taken, 2 males and 3 females. A single female Tolmiei warbler was seen flitting about in the arrow weed and was collected. On the lake a few coots, great blue herons and Am. egrets were seen. A few green herons were also seen along the shore. Several wood pewees were seen and a few tanagers also noted.

May 26

Hot and clear. Highest temp. 100° F. This morning I hunted along the lake from about a mile north of Yuma to Lake Haughtelin. At the large lake about a mile north of Yuma 2 gr. yellowlegs were seen feeding in the shallow water. They were quite shy and arose when I approached and after circling about with a swift flight alighted again. However, I was unable to get within range. Nothing else of importance was noted. A pair of green herons were seen along the shore. A great blue heron was flushed from the shore. A white-rump shrike was collected on the levee near the lake. Red-wings were common in this area being the most abundant bird. A few ground doves were seen and white-wing doves were heard calling. Yellow warblers were seen in the willows. At lake Haughtelin a single yellow-headed blackbird was seen and heard calling in the tules.

I then came up to the desert wash north of the main canal and about a half mile west of the Exp. Farm. Birds were not plentiful here. Phainopeplas were fairly common. A few western tanagers were seen and a female collected. A pair of white-wing doves were seen and a few mourning doves also. A wood pewee was taken in the lower part of the wash.

May 27, 1930

Partly cloudy and sultry. This morning I hunted at the desert wash about 3 miles north of Potholes. Birds were not plentiful here. A few pairs of yellow warblers were seen in the palo verdes and 2 were collected. Western tanagers were seen in small numbers in the palo verdes and a female was taken. A single western? flycatcher was seen and collected and another Empidonax male noted. Two nighthawks were flushed from the shade of palo verdes. A few phainopeplas were also seen about the palo verdes. Verdins were also noted. A pair of house finches were seen and a small flock of redwings flew over towards the river. On the way back to the ranch I stopped at the willows above Potholes. Here yellow warblers were common in the tops of the willows and were often heard singing. Chats were very noisy and several were seen. A warbling vireo was collected and others seen. A few Cooper tanagers were noted. Also saw a few wood pewees. Few Abert's towhees were seen also; a western kingbird was seen flying with an insect in its beak.

May 28

Warm and clear. This morning I hunted among the willows above Potholes a short distance. Yellow warblers were common and 2 taken. A single pileolated warbler was seen flitting in the willows and was collected. Warbling vireos were seen and heard calling and one was collected. Chats were common and were often heard calling. Several Cooper tanagers were seen and a female taken. An Empidonax flycatcher was collected and another seen. A female cowbird was also taken and others seen in the willows. A single verdin was collected from the arrow weed in the willows. In one place among the larger willows a pair of Cooper hawks were flushed. They circled about several times calling and perched often in the tops of the willows. I looked for a nest but was unable to see one.

May 29

Warm and clear. Today I worked in the desert wash area north of the main canal. Little of importance was seen. A few western tanagers were seen. Several white-wing doves were seen and heard. Phainopeplas were common. A number of ash-throated flycatchers were noted. A few mockers were also seen.

I then went over to the willow area east of the Cocopah canal where I hunted for a short while. Little was seen. A cactus wren was collected from a cottonwood where it was seen to fly. Gila woodpeckers were fairly common.

May 30, 1930

This morning I hunted along the lake a mile above Potholes. Upon arriving I saw a glossy ibis wading in the shallow water of the lower part of the lake. After a careful stalk I managed to collect it. No others were seen. A large flock of about 75 wood ibises were perching on the dead willows in the lake. Numbers of white pelicans were also seen. A flock of nine black-neck stilts were feeding in the shallow water along the shores and were very wary. A single *Myiarchus magister* was seen to fly into a willow and was collected. A few yellow warblers were seen in the willows and one taken. Several *Empidonax* sp. were seen and 2 taken. A western flycatcher was also collected.

May 31

Today I hunted in the desert wash area north of the main canal. Western tanagers were present in small numbers. Several white-wing doves were seen and heard calling and one was collected. *Phainopepla*s were common. A pair of plumbeous gnatcatchers were seen in an ironwood. A single western flycatcher was seen in a palo verde and was collected. In the lower part of the wash 2 *Empidonax* sp. were taken and a warbling vireo was also collected from a large tamarisk.

June 1

Warm and clear. This morning I went up to the lake a mile above Potholes. There were a large number of white pelicans on and flying over the lake. A small flock of wood ibises were seen circling over the lake. Several coots were noted and also a few great blue herons. A few green herons were seen along the shore.

In the willows several chats were seen and heard. A few yellow warblers were seen and heard. The Harris hawk was flushed from a tall willow and was heard calling. A few cormorants were seen flying over the lake. Several Cooper tanagers were noted.

June 2

This morning I hunted in the willows above Potholes. At the same place as previously recorded a single Cooper hawk flew calling to a tree close to me as I approached.

I collected the bird and it proved to be an incubating female. Nearby in an old burn I flushed an adult red-tailed hawk from its perch in a dead tree. A single *Myiarchus magister* was seen in a willow calling and was collected. A number of Cooper tanagers were seen. A spotted male was seen in company with a female and was collected. It was in breeding condition. Several cactus woodpeckers were seen and heard. At the lake about a mile above Potholes I saw a flock of about 15 black-necked stilts and procured one. A few wood ibises were seen and also a number of white pelicans. Two adult black-crown night herons were seen flying.

June 3, 1930

Warm and clear. Highest temperature 90°. Today I went to the lake about a mile above Potholes. A single Am. egret was seen flying. A number of wood ibises were seen perching on the dead willows in the lake. There were a large number of white pelicans present. A few great blue herons were seen and also a few green herons. Several coots were noted. Chats were seen and heard. Yellow warblers seen and heard singing in the willows. A small western flycatcher was seen in the willows. Several wood pewees were seen. The Harris hawk was heard calling from its perch in the willows. A few cactus woodpeckers were seen. Cooper tanagers were often seen. A horned owl was flushed from its perch in a willow south of the lake. A pair of white-wing doves was seen flying.

June 4

Warm and clear. The first locality worked this morning was about the two small lakes about a mile south of Bard. At the smaller lake little of importance was seen. Redwings were common about the tules. A few yellow-headed blackbirds were heard calling. A few coots were seen and heard calling. At the other lake a pair of Florida gallinules were seen on the shore. At one end of the lake a least bittern was seen perching on a dead tule near a large patch of tules. As I approached into range it flew into the tules. Its small size and brown back easily identified it. A few black-crown night herons were seen about the lake. A pair of killdeers were noted on the shore.

I then went up to the lake above Potholes. About 6 Am. egrets were seen perching on the dead willows in the lake with a number of wood ibises. White pelicans were common. A few cormorants were seen flying. A few great blue herons were noted and there were several coots on the lake. A road-runner was seen near the lake. A cactus woodpecker was seen and heard calling in a willow near the lake. This evening at dark a barn owl was seen flying near the ranch.

June 5, 1930

Hot and clear. Highest temp. 100° F. This morning I hunted in the desert wash area north of the main canal about a half mile west of the Exp. Farm. A family of about 5 ash-throated flycatchers was seen in the palo verde and an immature bird was collected. A parent was seen to feed one of the young. Phainopeplas were common in the upper part of the wash and numbers of young on the wing were seen. Several white-wing doves were seen. Also a few mourning doves. Downy young mourning doves were seen in a nest in the upper part of the wash. A few mockingbirds were seen and heard calling. Verdins were often seen and heard. A few pairs of Gambel quail were seen. A single Crissal thrasher was seen in the upper part of the wash and was taken. A few night hawks were flushed from the ground. In the lower part of the wash a ground dove was seen on the road.

Later I went up to the lake above Potholes. At the small pond below Potholes I saw an adult coot with 2 juveniles young. At the lake a number of wood ibises and white pelicans were seen. A few blue herons were noted and a green heron seen on the shore.

June 6

Warm and clear. Today I hunted in the willows above Potholes. Nothing unusual was seen. Chats as usual were heard and seen. Yellow warblers were common in the willows.

June 7

Hot and clear. Highest temp. 110° F. This morning I again worked in the willows above Potholes. Chats and yellow warblers were often seen and heard. Several pairs of Cooper tanagers were noted. A single western? flycatcher was seen in a willowfly catching and was taken. Bullock orioles were seen foraging in the willows and a female was collected. A few cactus woodpeckers were seen and heard. Ash-throated flycatchers were noted.

At the lake above Potholes a number of wood ibises and white pelicans were seen.

June 8

Hot and clear. I again hunted in the willow area north of Potholes this morning. The usual Cooper tanagers, chats and yellow warblers were seen in the willows.

At the lake about a mile above Potholes 3 American egrets were seen. White pelicans and wood ibises were numerous.

While walking among the willows near the lake a Calif. cuckoo flew into the lower part of a willow nearby. I was fortunate in collecting the bird which was an incubating female. No others were seen though a few were heard calling. Two turkey vultures were seen perching in dead trees.

June 9, 1930

Part cloudy and sultry. This morning I went down to the lakes about a mile south of Bard. On the larger lake 2 pair of Florida gallinules were seen near the tules. Several coots were also seen. A single male cinnamon teal flew past overhead a few times. A single pied-billed grebe was seen catching fish in the shallow water close to shore. At the lower end of the lake near a large patch of tules I saw a least bittern perching on an upright stick in the shallow water. I was successful in collecting the bird. Several green herons were seen along the shore. One was frightened away from a six inch sunfish that it had just caught. An adult black-crown night heron was flushed from the top of a willow. A pair of killdeer were calling loudly along the shore. Mourning doves were frequently flushed from the water's edge. A single kingbird was seen flying along the willows on the opposite side of the lake. At the smaller lake yellow-headed blackbirds were occasionally heard calling. Redwings were abundant. A great blue heron was flushed from the shore and a few coots were also seen.

June 10

Partly cloudy and sultry. This morning I walked in the willows north of Potholes as far up as the lake. In the willows a few cuckoos were heard calling. One was heard making the cuckoo call and was stalked. I was unable to see the bird, however, until it flew. I later saw one fly across an open space in the willows. Several cactus woodpeckers were seen and heard.

At the lake wood ibises were abundant as were also the white pelicans. Coots were often seen. A Florida gallinule was seen wading in the shallow water of the lower end of the lake. A flock of 8 black-neck stilts were seen wading in the shallow water. Two great blue herons were seen and also a few green herons. One American egret was seen perching on a dead willow in the water and later one was seen flying.

A few Empidonax sp. were seen in the willows near the lake and 2 were taken. A mockingbird was seen singing loudly from the top of a dead tree near the lake.

June 11, 1930

Warm and clear. This morning I again hunted in the willows along Potholes. A few cuckoos were heard clucking in the willows but could not be seen.

At the lake coots were seen and also one Florida gallinule. A single American egret was seen flying. A single spotted sandpiper was watched feeding on the muddy shore.

June 12

Weather warm. A brisk south wind blew most all day. This morning I hunted first along the hills and canyons just south of Potholes. Very little was seen. A single Say phoebe was seen perched in an ocotillo and was calling loudly.

I then hunted in the willows above Potholes. I often heard cuckoos clucking in the willows and collected a male from a willow near the lake.

At the lake a few white pelicans and wood ibises were noted. Two great blue herons were seen. A few green herons were also noted.

June 13

Warm and clear. Today I hunted about the two small lakes a mile south of Bard. At the larger lake a Yuma rail was flushed from a clump of tules on the shore. One was later flushed near the same place. A pair of Florida gallinules were seen at the tule bordered end of this lake. Redwings were abundant and several immature birds on the wing were seen. One immature bird was seen in the tules that had evidently just recently left the nest as the yellow skin on the sides of the bill was prominent and there was yet down clinging to the head. A few black-crowned night herons and green herons were seen. A single Empidonax sp. was seen in the willows along the shore and was taken. Cuckoos were clucking in the willows and two were seen flying.



June 14, 1930

Warm and clear. this morning I hunted about the lake about a mile above Potholes. Very little was seen. A yellow-headed blackbird was heard calling in the tules at the upper part of the lake. A few wood ibises and white pelicans were noted. A few coots also seen. An occasional cuckoo was heard calling in the willows but none were seen.

June 16

Hot and clear. This morning I worked about the two small lakes a mile south of Bard. Redwings were abundant. A yellow-headed blackbird was heard calling. A few coots were seen on the small lake. At the upper lake a pair of Florida gallinules were seen with a single juvenile young. It was quite small and remained close to a parent. A least bittern was flushed from the shore close to some tules. Later another was seen to fly into a cane patch on the opposite edge of the lake and after a short wait it was secured. Two pair of killdeer were noted along the shore. Cuckoos were heard calling and one was seen flying. I saw a flock of about 50 wood ibises flying over the valley in the vicinity of Bard.

June 17

Hot and partly cloudy. This morning I hunted about the lake above Potholes. Little of importance was seen. On the lake wood ibises were present in small numbers. A small flock of rough-wing swallows were seen near the lake.

June 18

Warm and cloudy with a slight rain. Today I again hunted at the lake above Potholes. In the willows cuckoos were often heard calling and a few were seen. One was collected. Chats and yellow warblers were common. Bullock orioles and cowbirds were also seen.

On the lake were the usual numbers of wood ibises. A few great blue herons were seen and coots were noted.

This afternoon a small flock of wood ibises alighted near the alfalfa field on ranch. It had recently been irrigated. They remained only a short time.

June 19, 1930

Warm and clear. This morning I hunted about the lakes south of Bard about a mile. A single Yuma rail was flushed from the shore near tules. A least bittern was seen to fly into a patch of tules. A pair of Florida gallinules were seen on the muddy shore at the upper end of one lake. Three black-crown night herons and one great blue heron were seen. A few green herons were also noted along the shore. Coots were also noted on the smaller lake. A pair of pied-billed grebes were seen near a tule patch at lower end of one lake.

Near the upper lake 3 gilded flickers were seen in a dead cottonwood. No red marking was seen on any of them and one which was shot was an adult female so the other two were probably immature birds.

June 20

Warm and clear. This morning I hunted in the willows above Potholes.

Cuckoos were often heard and seen and an incubating male taken. Little else of importance was noted.

Later in the morning I hunted about Keyser's Slough for redwings. Three adult male redwings were secured and one cowbird. Two tule yellowthroats were seen in the tules about the pond. In the large cottonwoods near the pond several western kingbirds were seen, most of which were immature birds. A parent was seen feeding one young bird which was fairly well grown but the short tail was plainly noticeable.

June 21

Warm and clear. This morning I hunted in the willows above Potholes mainly for the purpose of securing cowbirds. Cowbirds were common in this area but were quite wild and I had difficulty in getting within gun range on most of them. Two males and one female were secured, however. The males were more often seen and heard calling.

Cuckoos were often heard calling and a few seen. A few blue grosbeaks were seen in the willows near the horse corral.

June 22

Warm and clear. This morning I devoted most of my time to collecting male redwings about Keyser's pond and the drainage ditch. Redwings of both sexes were common at both places and a few females were seen carrying food in the bill. Six males were secured. A few wood ibises were flushed from the pond.

June 23, 1930

Warm and clear. This morning I hunted in the willows above Potholes. Several cowbirds of both sexes were seen and heard calling but they were quite wary and only one male was secured. Several blue grosbeaks of both sexes were seen; the males more often seen. One male was collected. Abert's towhees were often seen, there being numbers of immature birds on the wing.

At the lake numbers of wood ibises were seen and also white pelicans.

Cuckoos were heard calling and one was seen flying.

June 24

Warm and clear. This morning I hunted among the willows above Potholes. Cowbirds were fairly common and I was able to secure two. Cuckoos were heard calling and a few seen. One was collected. Blue grosbeaks were noted in the willows about the corral. Later in the morning I hunted for male redwings about Keyser's pond and secured three specimens.

June 25

Warm and clear. This morning again hunted above Potholes for cowbirds. With better luck I was able to secure four cowbirds and numbers of others were seen.

June 26

Warm and clear. Highest temp. 102° F. This morning I hunted in the willows north of Potholes. Six males and one female cowbird were taken. Others seen. A few small flocks were noted in which the males predominated. Occasionally pairs were seen and other single males were seen. They were all quite wary and would often fly out of sight at the first glimpse of me.

Cuckoos were often heard clucking and a few individuals were seen.

Warbling vireos were heard calling in the willows. A single Empidonax sp. was seen and collected. It proved to be an incubating female.

At the lake a few wood ibises were seen and also a pair of black-neck stilts. The stilts were feeding in the shallow water at lower part of the lake. A few Farallon cormorants were seen flying.

June 27, 1930

Warm and clear. This morning I hunted above Potholes again. Several numbers of cowbirds were seen but none were obtained. However, I secured an adult mourning dove and an immature Abert's towhee. Warbling vireos were heard calling.

June 28

Returned to San Diego.

April 21st - April 24th 1930

Bard and Potholes

June 12th - June 14th 1930

Upper Lower California, Mexico

April 21, 1930

Arrived in Bard district about 2p.m. Saw several pairs  
(3) Ground Doves enroute to ranch.

April 22

Hunted near Potholes, saw 3 Spotted Sandpipers. On main canal 10 Least Sandpipers, along shores of small pond 1 Killdeer. Heard 2 male Yellow Throats singing & were probably nesting in the tules. Saw Florida Gallinule. The bird was perched in the tiny branches of a dead Atroplex bush and was about 4 feet above the water. It flew across the pond into the tules alighting on vertical stems at a point 4 or 5 feet above the water. This was my first experience with the perching habits of Gallinules.

In the willow - cottonwood assoc. Chats were heard singing as were an abundant population of Sonoran Yellow Warblers.

Saw Cooper and Sharp-shinned Hawk, 1 Western Raven. Sam shot a Warbler that I believe to be a Myrtle??

Heard Cooper Tanagers. After a couple of hours we drove up a desert wash. Very little bird life. Shot 1 Chipping Sparrow, saw 3 Golden Eagles high up in the air.

Drove to Yuma in late afternoon. Near Indian Hill about 40 Least Sandpipers were seen flying. Enroute to camp after dark several Black-crowned Night Herons were observed along the ditch banks by the road side. Upon arrival at the ranch a lone Poorwill flushed from the road. This bird was later collected by flashlight.

A lone Mearns Flicker was observed 1 mile south of Bard this afternoon. It was perched in a large Cottonwood. Apparently the general removal of most of these large trees about the farms is responsible for the sharp decline in Flicker population.

April 23

Hunted around lake 1 m north of Potholes today. Enroute near Potholes a pair of Cinnamon Teal were seen on a small pond.

Day quiet and balmy. Saw 1 Sharp-shinned Hawk, several Snowy Egrets and about 12 American Egrets. These birds will probably nest. Saw several Farallon Cormorants, 1 was carrying a stick. This seems to be evidence of their nesting. On my first visit to this lake in 1920 there were several dead trees out in the water that held Cormorant nests.

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There is apparently a nesting colony of Black-crowned Night-herons. Pallid G.B. Herons are also rather common. Mr. Becket of the Experiment Farm told me there was a large colony nesting about 20 miles up the river.

Saw many Cliff Swallows and a few Vaux Swifts - all too high to shoot at.

I killed a fine male Cooper Tanager. Coots abundant on the lake. Set my flash trap this evening & while at work about a thousand Lesser Snow Geese flew over, high. On the way to camp we collected two Poorwills and a huge rattlesnake (16 rattles).

April 24, 1930

Hunted in the desert wash north of the main canal. All the shrubs and trees were in full leaf and showing signs of considerable rain during the past few months.

Saw a lone Prairie Falcon. Migrating birds were abundant. Chipping Sparrows, Brewer Sparrows, Calavares Warblers, Pileolated Warblers, Talmin Warblers, Western Flycatchers. I shot a Townsend Warbler that was not saved. W. Warbling Vireos were especially abundant. Saw the raven again today. Cliff Swallows abundant. Saw the first Western Tanager at the Experimental Farm near Bard. It was an adult male. Several Yellow-headed B. Bds. at ranch. Killed two Poorwills on the main canal bank after sunset.

April 25

Hunted over same ground again today. Birds were abundant. Saw an Audubon Warbler, many Calavares Warblers, Western Flycatchers abundant. Few Tolmin Warblers. Saw 4 Green-backed Goldfinches near Potholes.

Killed medium-sized rattlesnake in desert wash. Shot Linnet at ranch and saw 3 more.

April 26

Left for San Diego about 8:30 a.m.

June 12, 1930

Left San Diego in company of Seth Benson & Frank Stephens bound for a short trip in search of the rare *Perognathus pacificus*.

Arrived at the U.S. - Mex. Boundary about 3 p.m. & passed without trouble of any sort. Our route lay up the Tia Juana river canyon as far as Valle Redondo junction. Here we crossed the railroad tracks on the inland road to Ensenada. Shortly after crossing the tracks we picked up a California Boa (snake) in the road. Turned south at Carriso Ranch.

After several miles of rolling country we came to Valle de la Palmas. This valley is extremely interesting botanically. A great forest of mesquites grows on the valley floor while the river wash is lined with huge Cottonwoods. Three kinds of mesquite are present, Catclaw, Screwbean & Common Mesquite. The only birds of interest noted were 5 Bluebirds which were flushed many times from a telephone line. Seth finally had a chance shot at one from the car but did not kill it.

After looking the larger part of the valley over for a good trapping locality we went back to the area on the north side where the road enters the valley.

Huey traps were set through the mesquite - fruitea and Jojoba association. Soil hard, slightly sandy.

Benson traps through fruitea, flat-leafed cactus - scattered mesquite, Nigger-head cactus. Soil fairly hard.

Stephens traps through fruitea, flat-leafed cactus, Nigger-head cactus, very little mesquite.

Looked at my traps at 9 p.m. and found 5 *Dipodomys a. similans*. Caught 2 with the gas lantern.

Benson's traps held 2 *Neotoma i. intermedia*, 4 *Dipodomys a. similans* & one *Perognathus f. fallax*.

Did not look at Mr. S.'s traps.

June 13

My traps held 4 *Dipodomys a. similans* & 2 *Onychomys t. ramonae*.

Benson's traps held 4 *D. a. similans*, 1 *Perognathus f. fallax* & shot a cottontail.

Stephens' traps held 3 *Perognathus f. fallax*, 1 *D. a. agilis* & 1 *Peromyscus m. sonoriensis*.



Packed up and left about 2 p.m.. Picked up a Horned Toad at La Posta. At Vallecito acorn-storing Woodpeckers were heard & seen amongst some large Calif. Live oaks. Shot an adult female Cooper Hawk & found the nest containing half-fledged young. Kept running until we were almost to the ocean. Set traps after dark over burned area. This place is about 4 miles north of Ensenada.

Night cold and misty.

June 14, 1930

My traps held 1 *Dipodomys a. semulans*, 1 *Perognathus m. gambeli*.

Benson 2 *Dipos*  
Stephens nil.

We packed up and drove into Ensenada. Spent an hour at Sawclapston, then drove on down to Punta Banda.

On our way we kept a constant lookout for prospective trapping localities. Our site was found about 14 miles south of Ensenada. This locality was in the soft alluvial soil of Los Americas Creek and was well clotted with chaparral. Kangaroo Rat sign was abundant. And it gave every indication of a good trapping locality.

We went on as fast as the road went on Punta Banda.

January <sup>12</sup>~~21~~ - 14, 1931

Huey, Stephens, Bailey and Harter

San Felipe, Lower Calif., Mexico

January 12, 1931

Bernard Bailey & Sam Harter left San Diego at 6:30 a.m. bound for Calexico in the Model T.

Mr. Stephens and I left at 8:30 in the A.A. truck and arrived in Calexico at 12:30. Harter and Bailey beat us by about 5 minutes. Some snow and ice were seen on the higher mountains. Birds were noticeably scarce tho a large bunch of juncos were seen in Pine Valley.

After having my truck serviced and buying a few last things all four of us embarked in the truck & set out for San Felipe, Lower California, Mexico. The papers we had obtained from Mr. Ferrara, the Mexican Consul in San Diego, worked splendidly and we were given every courtesy, with but half an hour's delay.

Leaving Mexicali about 2:30 the trip was uneventful. Saw the first interesting birds at El Major where 2 Pallied great blue herons & 3 Black-crowned night herons were seen. Darkness overtook us shortly and we stopped for a light evening meal.

The 40 miles of salt flats were dry and crossed without trouble. Made camp about 30 miles north of San Felipe.

Each of us set a couple of dozen traps blindly. The desert wash was sandy and rather sparsely brushed.

Stephens' and Sam's traps were undisturbed. Bailey caught 1 *Dipodomys m. arenavagus* and my line held a single *Dipo. deserti*. This locality was called 30 miles north of San Felipe.

We packed up as quickly as possible and left for San Felipe. At almost every well-wooded wash we crossed San Pedro blue-birds and *Phainopeplas* were seen. In one wash a Le Conte thrasher was seen perched high up in an ocotillo and stayed long enough for me to put my gun together and collect it. Afterwards several bluebirds were taken.

A few miles from our proposed camp site we found a truck, loaded with fish, broken down. Another truck had passed around him during the night but an assisting truck that had brought repairs from San Felipe was back of him and the sand was so deep as to be almost impossible to pass both cars. After half an hour I presented the truck driver with food and they generously pulled the empty truck out of the way and we passed without the least difficulty. Some trouble occurred in getting the other truck back again but was finally accomplished.

January 13, 1931

Camp was established by the road side on the north side of the rocky hills near San Felipe. We all set our traps . Stephens took his about 2 miles to the eastward and near the beach. Bailey, Sam and I set our lines nearby working up onto the rocky hillsides.

Six Schuylers were set for *D. deserti* near camp. At bedtime 3 *D. m. arenevagus* had been caught.

Jan 14

Our traps (240+6) were a dismal failure as far as the desired *Perognathus* were concerned.

Stephens - 5 *D. m. arenevagus*, 3 *Peromyscus crinitus*, 1 *Neotoma intermedia*.

Bailey - 4 *Dipo. m. arenevagus*, 4 *Peromyscus crinitus*.

Huey - 2 *Peromyscus crinitus*,

After breakfast I set off on a hike & walked from camp to the shore of the gulf, thence around the hills following the shore line to San Felipe and returned by way of the road. This made about 10 or 12 miles. In all that distance I saw 1 Rock wren & 3 Desert sparrows of the land birds, and shot 1 Eared grebe which drifted out to sea. A great bunch of Surf scoters were feeding some distance from shore. A few Large-billed & Hudsonian curlew were feeding along the shore in company of a fair sized flock of *W. willets*. About 15 Elegant terns were seen.

This evening I set my line along the wash as did Sam & Bailey. Stephens did not pick up his traps this morning.

Notes written by  
Samuel G. Harter

January 12th - 23rd 1931

San Felipe, Baja Calif., Mexico

January 24th - March 8th, 1931

Bard, Imperial County ,  
California

January 12, 1931

Bailey and I left the Museum this morning at about 7 a.m. in the Museum Model T Ford. The day was sunny and clear. We arrived at Calexico about noon. We met Huey and Stephens about a half an hour later. After eating dinner and buying a few articles we crossed the line in the Model A truck, having no trouble with custom officials. We drove south until about 9 o'clock when we made camp for the night by the side of the road about 35 miles north of San Felipe. We set our traps about camp. The country here was a desert wash in character and sparsely overgrown with creosote, sumach bush etc.

Jan 13

Our trap yield was very poor. Only 2 *Dipodomys* being taken; 1 *merriami* and 1 *deserti*. We packed up and left about 8:30 a.m. On the trip south we collected 4 *Anabel* Bluebirds and a *Le Conte* Thrasher near the road about 25 miles north of San Felipe. We made our first permanent camp near the hills just off the road about 5 miles north of San Felipe. We arrived here about noon and set up the tent. Bailey and I hiked over to the Gulf of California which is about a mile east of camp. No land birds were seen on the hike over. The land east of camp is overgrown largely with a growth of creosote and ocotillo. On the beach we saw about 2 hundred large gulls most of which were Westerns. We also saw small numbers of American Curlews, Hudsonian Curlews and Western Willets. No Sandpipers were seen. An Osprey was seen flying over the beach. We hunted back to camp and in the washes west of camp. I saw two Verdins but was unable to get one. They were in a Cherry-leaved Copal. A Shrike and a Say Phoebe were also seen near camp. Bailey saw a small number of Desert Sparrows and shot one.

I set out my mouse traps in the small washes in some low rocky hills northwest of camp. Cherry-leaved Copals, creosotes, ocotillo, Palo Verde and mesquite were the more conspicuous shrubs.

Jan 14

My trap yield was very poor this morning being only 4 *Peromyscus crinitus*? and 3 *Dipodomys merriami*. This morning I hunted in the washes around the rocky mountain northwest of camp and later walked down a large wash to the Gulf. Birds were very scarce. During the hunt I saw two Desert Sparrows, several *Phainopepla*s, a small flock of about 5 Western Bluebirds, a few Verdins, a few Mockingbirds and along the beach I saw a flock of Willets, one Marbled Godwit, a few Hudsonian and American Curlews. Two elegant Terns were seen fishing along the shore.

This afternoon I again hunted down the washes towards the Gulf. I collected a Mockingbird, a Verdin and a male Costa

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Hummingbird. A few more Verdins and Mockingbirds were seen. Several Black-tailed Gnatcatchers were seen in the brush during my hunt. Le Conte Thrashers were heard calling in the lower part of the large wash but were not seen. Several Linnets were seen perching in Smoke Trees in the lower part of the wash.

This evening I set my traps along a little sandy wash north of camp. The characteristic shrubs here are creosotes and Palo Verde.

January 15 1931

My trap yield this morning was 12 *Dipodomys merriami*. This morning I hiked down the large wash to the Gulf. Birds were very scarce. I saw a few *Phainopepla*s and Verdins in the Palo Verdes. I collected a single Sage Thrasher from its perch in a low bush in a wash. A raven was seen flying over camp and was often heard calling. In the afternoon we packed up and moved camp to about a mile north of the main village of San Felipe. I set out my trap line this evening in the sandy washes about the base of a rocky hill northwest of camp

Jan 16

My trap yield this morning was five *Dipodomys merriami* out of 60 traps set.

This morning I made a long hike west of camp over washes and creosote flats to a large wide sandy wash which was sparsely overgrown with Palo Verdes and Ocotillo. I then hiked down this wash to the village of San Felipe and then back to camp. Birds were most unusually scarce. A few Verdins and *Phainopepla*s were seen in the wash but were very wild. Three Hummingbirds were seen during the hunt, probably *Costas*. A single Say Phoebe was seen in a small wash about a mile west of camp. A number of Turkey Vultures and Ravens were seen flying over camp and the nearby hills.

This afternoon Huey, Stephens and I drove down to the village of San Felipe. A small number of California and Western Gulls were seen along the bay. Their numbers seemed quite small considering the quantity of fish entrails & heads along the shore. A few Large-billed Sparrows and one Audubon Warbler were also seen along the shore. A single Eared Grebe was seen diving in the quiet water a short distance from shore.

This evening I set out my traps in the small washes in the desert pavement near the base of a rocky hill about a half mile north of camp. The principle shrubs here were *Encelia*, Creosote and Cherry-leaved Copal. Bailey shot a Verdin in a wash near my trap line.

January 17, 1931

My traps yielded 4 *Dipodomys merriami* this morning.

This morning I hiked with Stephens down to the village of San Felipe where we gathered shells and I hunted for birds along the rocks of the bay shore east of the town. A few Large-billed Sparrows were seen on the beach in the village but nothing except a few Gulls were seen on the rocks. A Hairy Eared Grebe was seen swimming and diving in the bay off shore a short distance.

Shortly after noon I hiked over to the washes among the hills northwest of camp. Nothing was seen. In a small wash overgrown with Palo Verdes about a half mile west of camp a pair of *Phainopeplas* were seen and the male was collected. A number of Turkey Vultures and Ravens were seen flying about camp and vicinity.

This evening Bailey saw a Le Conte Thrasher and a Cactus Woodpecker in a wash above camp. We succeeded in collecting the Woodpecker.

This evening I set out my traps up a small wash on a rocky hill north of camp. The principal shrubs were *Encelia* and *Creosote*.

Jan 18

This morning Bailey and I started out on a bird hunt to the large Ironwood wash about 2 miles southwest of San Felipe. There was a strong north wind all day. A number of Turkey Vultures and Ravens were seen near the village and one of each was collected. During the course of the hunt 6 Verdins were collected and a number of others seen and heard. A number of Black-tailed Gnatcatchers were seen in the *Fruitea* bushes below the well and four were collected. In the large Ironwood-covered wash numbers of *Phainopeplas* were seen. Several Mockingbirds and a Shrike were also noted. A flock of about 25 Anabel Bluebirds were seen in a mistletoe-laden Palo Verde and four were collected.

While returning to camp three Sage Sparrows were seen on the sand among the creosote bushes near San Felipe. I succeeded in collecting one.

This evening I set out my traps in the little washes on the base slope of the rocky hill north of camp.

Jan 19

Most of the day was spent in skinning birds collected yesterday. There was a brisk north wind again today. Bailey brought in two Anabel Bluebirds, a Costa Hummingbird and a Black-tailed Gnatcatcher. This evening I again set out my traps in the same general place as last night.



January 20, 1931

I spent most of the morning skinning up birds.

This afternoon we went down to the village for water. A few California Gulls were seen along the beach. A number of Large-billed Sparrows were noted on the beach in the village. A single Eared Grebe was seen diving off the rocks near the village. A single Farallon Cormorant was also seen fishing in the water.

This evening Bailey brought in a Black-tailed Gnatcatcher. I placed my traps in the Encelia covered rocky washes of the base of the large mountains north of camp.

Jan 21

My trap yield was 6 *Peromyscus crinitus*? This morning Huey and I went down to the village in quest of bats and Marsh Sparrows. We followed along the rocky shore line at the base of the hill west of San Felipe searching for bat caves. We found several which showed signs of having had bats at one time or other because of the guano on the floor of the caves. However, we found only one cave occupied by over a hundred Leaf-nosed Bats. I was successful in catching about fifteen of the cluster which clung closely sacked together in a crevice in the top of the large cave.

On the beach on the rocks close to San Felipe a small number of Large-billed Marsh Sparrows were seen and a pair were collected. A single Audubon was seen and collected from the muddy ground near a puddle of water near the village. The Eared Grebe was again seen diving in the bay near the rocks. A number of Turkey Vultures and gulls were flushed from a refuse pile of fish heads and entrails. This afternoon I saw an Osprey perched in an ocotillo eating a fish. An attempt was made to shoot it but the bird proved too wary.

Mr. Bernard Bailey brought in 3 Verdins and a Costa Hummingbird this evening from a wash west of camp.

This evening I set my traps in the rocky Encelia covered washes along the base of the rocky hills north of camp.

Jan 22

My traps held 4 *Peromyscus crinitus*? This morning I hunted in the washes southwest of camp. Birds were not common. Several Verdins were seen and heard calling. A Black-tailed Gnatcatcher was heard calling. Two Costa Hummingbirds were seen in the washes. A single male Linnet was collected from a fruitea bush in a wash near the village. A Burrowing Owl was seen perching on a bank nearby but I was unable to get into gun range of it. A Sparrow Hawk was seen perching in the top of a tall ocotillo west of San Felipe. Bailey shot a Sage Thrasher from a Palo Verde in a wash west of camp. There was practically no wind today and the temperature was probably higher than that of any day since we arrived.

An Osprey flew west over camp quite low the early part of the afternoon. This evening I set my traps in the rocky washes off a low range of hills north of camp.

January 23, 1931

This morning I took 2 *Perognathus baileyi* ? and 2 *Perognathus formosus* from my traps.

We packed up this morning and left about 2:30 p.m. for Calexico.

In the washes about 20 miles north of San Felipe several flocks of Bluebirds were seen in the Ironwoods and Palo Verdes and 5 were collected.

We made camp about 10 miles south of Mexicali at 12:10 a.m.

Jan 24

This morning we arose early and continued on to Calexico crossing the line about 7:30 a.m.

Bailey and I got the Model T truck at Calexico and started out for Bard, Imperial Co., Calif. We arrived at Huey's ranch at Bard about noon and spent most of the afternoon cleaning up the house and moving in. Later in the afternoon we went to town for a number of supplies.

Jan 25

This morning I remained at the house making up the Bluebirds collected on the 23rd.

This afternoon Bailey and I went up to the lake about a mile above Potholes for wood and to hunt birds. Birds were not very plentiful in the willows and cottonwood, probably partly due to the strong north wind. The lake had gone down quite low. Numbers of ducks were seen flying west over the lake beyond the tules! We could distinguish Pintails among them.

A pair of Red-shafted Flickers were seen in the willows near the lake and I was able to collect the female. Bailey shot a female Cactus Woodpecker close by. A few Ash-throated Flycatchers were seen about the dead willow snags near the lake and one was taken. A single male Sparrow Hawk was seen to fly into a willow and was collected. An Audubon Warbler and a Ruby-crown Kinglet were seen in the willows. A few Black-tailed Gnatcatchers were noted in the thick willows near the lake.

then  
Bailey and I came back to a desert wash north of the ranch about a mile on the north side of the main canal where Bailey set out some of his traps. I hunted in the wash but did not find many birds. A few Black-tailed gnatcatchers were seen and two taken. Two Brewer sparrows were seen on the ground and one collected. A flock of blackbirds were seen in a mistletoe laden Palo Verde but they were very wild and I was unable to get any.

A single Spotted sandpiper was seen on the bridge crossing the main canal.

January 26, 1931

This morning I again went up to the willow tract a mile above Potholes. Two Western gnatcatchers, an Audubon Warbler, a Cactus woodpecker were collected. As there was a strong north wind few birds were seen here.

This afternoon Bailey shot a Junco and a Chipping sparrow from a small flock seen on the ranch.

Jan 27

I skinned birds this morning, Bailey brought in two Abert towhees taken from his Sigmodon traps. He also shot a Desert sparrow from across the canal. This afternoon we went to Yuma to get the broken springs on the truck replaced.

Jan 28

I hunted about the ranch this morning. Brewer and Gambel sparrows were abundant and were seen drinking in the drainage ditch. One Gambel and two Brewer sparrows were collected. A number of Vesper sparrows were seen in the fields and one was taken. A single male Tule yellowthroat was collected from the tules bordering the drainage ditch.

Two female Red-shafted flickers were collected from the cottonwoods near Vreeland and several others were seen and heard calling.

Jan 29

This morning I hiked up the large washes north of the main canal. Birds were scarce in the washes. A few verdins, phainopeplas and Crissal thrashers were seen and heard calling. I collected a male verdin from a Palo Verde. I also collected a Black-tailed gnatcatcher.

Near the Experimental Farms on the south side of the canal in the brushy area I collected a Sage sparrow from the ground.

Bailey also collected one near here. He also collected a Sage thrasher north of the main canal. He also shot a Pipit on the place and brought in two Song sparrows taken near Keyser's pond, one in a mouse trap. I collected a Brewer's sparrow and a Say phoebe on the ranch and this evening I shot an immature Sharp-skinned hawk from a large cottonwood near the house.

January 30, 1931

I again hunted about the ranch this morning. I took a roadrunner from one of Bailey's large trap set near the drainage ditch. In a cotton field I collected a Say phoebe, 2 Brewer blackbirds which were following the slew, and a Western meadowlark. I also shot a Brewer sparrow and a verdin near the ranch. Bailey collected a male Mt. bluebird from a pair he saw near the drainage ditch.

Jan 31

Today I hunted on the ranch and in the quail brush area near the road east of the ranch.

On the ranch I collected four Vesper sparrows from the large numbers which were in the fields. On the deserted ranch east of this one I collected Western gnatcatchers, a Say phoebe and a male Cactus woodpecker from the trees about the old house. In the bushy area just south of the main canal I collected a Sage sparrow from a flock of about 10, also collected a Shrike. I saw a Crissal thrasher here and in a mistletoe laden mesquite. I flushed a flock of about a dozen Western bluebirds.

Feb 1

Remained in the house most of day skinning birds and doing odd jobs. Bailey brought in a Song sparrow from a trap in Keyser's slough.

Feb 2

This morning I went up to the lake a mile above Potholes and hunted among the willows, cottonwoods and arrowweeds. Audubon warblers were fairly common and three were taken. Several Western gnatcatchers were seen in bushy places and one was taken. A single Empidonax gresens was seen and collected from its perch near an arrowweed patch. A small flock of Chipping sparrows were seen in the arrowweed and one was taken. A few pair of Vermilion flycatchers were noted and a male was taken. An Ash-throated flycatcher was collected from a mesquite where it had been fly catching.

Feb 3

This morning I hunted along the drainage ditch back of the ranch and over to the quail bush area along the Cocopah canal. In the tules along the drainage ditch I saw several

Marsh wrens and was able to collect one. I collected two Sage sparrows from the brushy area near the main canal. In the quail brush area near the Cocopah canal I collected a Black-tailed gnatcatcher, a linnet, and a verdin. I collected a Cactus wren from a mesquite near the road near the Potholes school house. Bailey also collected a Cactus wren near the main canal. He also got two Aberts towhee, from his traps in the tules at Keyser's Pond. On the ranch I collected a Junco from a cotton stalk. Bailey also shot a Chipping sparrow from a large flock in the cotton. We went to town this afternoon to see if grub had arrived.

February 4, 1931

It rained quite hard last night and was cloudy all day today. I remained indoors, putting up skins most of the day.

Feb 5

This morning I hunted about the ranch and hiked up the wash north of the main canal. I collected a pair of bluebirds from a dead cottonwood on the ranch. I also collected a sapsucker from a dead cottonwood tree on the ranch. Bailey collected two male sapsuckers from the Tamarisk trees on the Experimental Farms. Bailey also shot a female Sharp-shinned hawk near the Experimental Farms. I collected a Brewer sparrow in the wash. In a growth of cane on the bank of the main canal near the Exp. Farm I collected a male Tule yellow-throat. I also collected a Western gnatcatcher in the brush near the main canal and saw several large sparrows. I collected a Western robin from a cottonwood near the ranch.

Feb 6

Weather cloudy and cool. This morning I again collected on the ranch and in the brush near the main canal east of Dow's ranch.

On Keyser's ranch I saw a small flock of juncos and succeeded in collecting a male which had numerous albino feathers in the head and neck. Number of Brewer sparrows were also seen. I also saw several Vesper sparrows on Keyser's ranch and collected one. Near the drainage ditch I saw a single Black phoebe but was unable to collect it. I did not see many birds in the tules along the ditch. I did see two Lincoln sparrows, however, and collected one. A few Song sparrows were also seen. A Black-crowned night heron, immature, was seen and flushed from the drainage ditch.

February 7, 1931

Weather partially cloudy. This morning I hunted in the willow area north of Potholes. Birds were not very common and not a great variety seen. Audubon warblers were the most common in the willows and four were collected. A number of Brewer sparrows were also seen and one taken. Cactus and Gila woodpeckers were seen and heard calling in the willows and cottonwoods and a few Red-shafted flickers also noted. A few Western gnatcatchers were seen and heard in the bush. Two Ruby-crown kinglets were collected in the willows, a male and a female. A Sparrow hawk was seen near the lake.

Returning to the ranch I stopped at the little pond below Potholes but little was seen. A Blackphoebe was fly catching over the pond and calling often. Four adult Black-crowned night herons were flushed from the bank of the river below Potholes. Bailey brought me two Sage sparrows that he shot in the wash north of the main canal.

We went to town the latter part of the afternoon for supplies.

Feb 8

Today was spent at the house putting up skins and doing other necessary jobs. Bailey brought in an Abert towhee which he caught in a mouse trap on the ranch.

Feb 9

Weather warm and sunny most of the day. This morning I did my collecting on the ranch, Brewer sparrows were abundant about the ranch. Large numbers of Vespers sparrows were seen in the fields and two were collected. I made a pot shot into a mixed flock of Redwings which were perching in the tules of Keyser's pond and saved three females and a male for specimens. Several Mountain bluebirds were seen perching on dead cotton stalks in the fields and a male and female were taken. A large Sharp-shinned hawk was seen perching in a cottonwood tree on the ranch.

Bailey gave me a meadowlark and a Brewer sparrow which he took from his mouse traps on the ranch. While he was in the wash on the north side of the main canal he collected a Brewer sparrow and a Black-crowned sparrow from a large flock of Brewers.

Feb 10

Warm and partly cloudy. This morning I walked over to the levee and followed down a little road through the willows and cottonwoods on the other side. Before leaving the ranch I shot a male Red-shafted flicker from a dead

cottonwood tree. In the arrowweeds near the levee I collected a Crissal thrasher which was singing. I also collected a verdin from a mesquite near there. In the willows on the other side of the levee I collected three Ruby-crowned kinglets and saw several more. Western gnatcatchers were common in the arrowweeds and willows and two were shot. A few Audubon warblers were seen in the cottonwoods. Two Vermivora celata were seen in a cottonwood and one collected. A sapsucker was seen in the cottonwood but I was unable to get a shot at it. Several Cactus wrens were heard calling and one was collected on the levee.

Bailey collected a pair of Gambel quail and a Western gnatcatcher. The quail were from the wash on the north side of the main canal and the gnatcatcher was collected near the Exp. Farms.

February 11 1931

This morning I hunted up the wash north of the main canal but very little was seen. I collected three male linnets from a willow near the ranch. A flock of Western bluebirds were seen flying overhead on the ranch and in the wash. Three Mountain bluebirds were seen on the ranch. A number of Vesper sparrows were seen on the ranch and two were collected. A Say phoebe was also taken. A shrike was seen. Several Mourning doves were seen feeding on the ground in among the cotton stalks.

This evening Bailey and I went up to the lake above Potholes about a mile where he set out traps. A number of White pelicans were seen on the river below the dam. At the lake a few small flocks and individual mallards were seen flying near the lake.

Feb 12

It rained most all day today confining me in the house. A California ? gull was seen flying over Newton's alfalfa patch this afternoon.

Feb 13

It rained most all day today. I hunted a while in the morning about the ranch until the rain increased in intensity and drove me in. I collected two Western meadowlarks, two shrikes, two Mourning doves, a Say phoebe and a Vesper sparrow.

Feb 14

It rained hard most all morning. I went out for a short time and collected a killdeer near Keyser's corral. Bailey brought in a female Gambel quail from the wash north of the main canal. This afternoon Bailey and I went to town for

provisions and to send specimens. The rear end of the truck played out on the way into Yuma and we were forced to spend the night at Yuma and have repairs done.

February 15 1931

The truck was ready for us about noon. I saw a single Ground dove in a yard in Yuma. We got back to the ranch about 1:30 p.m.

Feb 16

Weather clear and warm. This morning I hunted in the willow - cottonwood area east of the levee south of Potholes about a mile. I saw several Orange-crowned warblers feeding in the upper parts of the cottonwoods and collected four. Western gnatcatchers were very common in the willows and brush and two were taken. A number of Audubon warblers were also seen and one taken. A number of verdins were seen and one collected. A Vesper sparrow and a shrike were collected in the brushy area near the Potholes school.

Feb 17

This morning dawned clear and warm. We went up to the lake about a mile above Potholes where Bailey looked at his traps while I hunted birds. I collected 3 Audubon warblers, a Ruby-crowned kinglet, a Western gnatcatcher, a Gambel sparrow, a shrike and a Say phoebe in the willows - cottonwoods along the lake. While Bailey was in the tules of a lake he collected three Tule wrens and a Spotted sandpiper. He also shot a Chipping sparrow from the willows. On the way back to the ranch we went up to the canal north of the higher line but nothing seen.

Feb 18

Weather warm and clear. Today I spent putting up skins and worked on specimens. Bailey brought in a Savannah sparrow which he shot from a small flock in a bush near Daw's alfalfa field.

Feb 19

I hunted about the ranch this morning and over<sup>to</sup> the levee. A Song sparrow was shot near the main canal. On the ranch I collected a female Mountain bluebird; its mate was also seen nearby. A pipit was collected from a small flock in a field. A pair of Brewer blackbirds were taken from a flock which were on a freshly plowed field. Little was seen near the levee.



February 20, 1931

This morning I drove to the large wash 3 miles above Potholes where I hunted for a short time. The wash was almost devoid of bird life. A few verdins were heard calling.

I then returned to the willow area near the lake, a mile above Potholes where I hunted. I secured two Audubon warblers, a female Vermilion flycatcher, a male Cactus woodpecker and a female Gila woodpecker.

An adult Red-tailed hawk was seen flying over the willows. Returning to the ranch I shot a robin from a small flock in a fig tree in front of the house.

Feb 21

This morning I worked in the cultivated area on and about the ranch. Several good sized flocks of robins were seen flying and searching in the cottonwoods; two birds were taken. In some low bushes near Dow's alfalfa field I shot two Savannah sparrows and saw a few more.

A Savannah sparrow was collected from a grassy place near arrowweeds and a few more were flushed.

Vesper sparrows were often seen and one was collected. Several flocks of Chipping sparrows were seen and three birds taken.

Feb 22

There was a very strong north wind this morning. I remained indoors most of day making bird skins and doing other odd jobs.

Feb 23

This morning Bailey and I hunted about in the cultivated area near the ranch. I collected a single junco from a mesquite near Dow's fields. No others were seen. Bailey shot a Savannah sparrow from an old cotton field near the grove east of Wallace's. A Vesper sparrow was also taken near there. Numbers of Audubon warblers were seen in the Date palms. A verdin was shot from a cluster of dates upon which it had been feeding. Two Chipping sparrows were collected near Dow's maize field.

Four robins were collected from flocks seen in the cottonwoods and near the date grove.

Feb 24

I hunted about the ranch this morning. Nothing unusual was seen. Three pipits were collected on the ranch and others seen. I collected a Gambel sparrow, a Vesper Sparrow and a robin. A Great blue heron was seen flying up the highline.

February 25, 1931

This morning Bailey and I went up to the lake about five miles above Potholes for the purpose of hunting ducks. Large flocks of Pintails and Green-wing teal were flushed from the lake and we were able to collect two Green-winged teal. A few flocks of mallards were also identified. Killdeer were numerous on the shore and a flock of Least sandpipers noted. A number of pipits were seen about the lake shore.

The afternoon Bailey and I returned to the lake where we hunted on the narrow strip of land between the lake and the river. Numbers of flocks of Green-winged teal and pintails passed between the lake and river. I was able to bring down a drake pintail and two more drake Green-winged teal. A flock of mallards flew high overhead. Bailey took a shot into a flock of Least sandpipers, killing several, of which five were saved.

A Marsh hawk was seen flying near the lake, also a Black phoebe and a pair of Vermilion flycatchers were noted. Tule wrens were common in the tule overgrown portions of the lake shore and were often heard singing and calling. Bailey saw several Tree swallows near the lake.

Returning home we flushed poorwills from the road about a mile above Potholes.

Feb 26

This morning I worked on some of the ducks collected yesterday. Huey came in about noon and it was decided that Bailey return with Huey to San Diego because of Bailey's ill health. We then spent most of the afternoon in gathering up Bailey's things and picking up traps, cleaning up the house, packing specimens etc. Huey and Bailey then left about 4 p.m.

I finished up the afternoon by picking up a line at Bailey's mouse traps which were set across the main canal.

Feb 27

Today I spent in making up the remainder of the ducks and sandpipers collected the 25th.

Feb 28

This morning I hunted in the cultivated area on the ranch and about the date grove east of Wallaces. A Song sparrow was collected from the tule bordering the drainage ditch. In an old cotton field near the date grove I collected a male junco which was perching by itself in the top of a dead plant.

No others were seen during the hunt. A Lincoln sparrow was collected in the Bermuda grass nearby. In the date palms Audubon warblers were common and two were taken. A verdin was collected from one palm and a few more seen in the same palm. A large flock of robins were seen in the cottonwoods near the date grove and one was collected. A few Red-shafted flickers were seen about the cottonwoods and one was flushed from a date palm. A Vesper sparrow was collected from a grassy field near the date grove and several more seen. A few Savannah sparrows were flushed from the alfalfa field on the ranch. A Brewer sparrow was collected from date palm on Dow's place. A Cactus wren was seen in a date palm in the grove east of Wallaces and Aberts towhees and linnets are also often seen.

I might mention here that the ocotillo are now in full leaf and have been since the rains. The cottonwoods are also in full leaf but the willows have not shown any indication of swelling buds as yet and are quite bare.

A strong north wind blew most of the day.

March 1, 1931

Remained about the ranch all day. Did not hunt.

March 2

This morning I drove down to Winterhaven to have a look around and pick up some birds. I found the country pretty well cultivated and no good places to hunt. I hiked around a little about a large alfalfa field and along a ditch and then down to the river. Birds were not very plentiful. Meadow-larks were fairly common. A pair of ducks were seen. A few Savannah sparrows were flushed from the alfalfa field.

I then drove up to Lake Haughtelyn, about 3 miles north of Ft. Yuma. I hunted along the water bordered shore. Little of importance was seen. Song sparrows were common in the brushy plots and one was collected. Two juncos were flushed from the ground near the lake and one was collected. An American egret was flushed from the shore of the lake.

Upon returning to the ranch I hunted over toward the date palm grove east of Wallaces place. In the arrowweeds I shot a House wren. I collected two Western robins, an Audubon warblers and a verdin from the date grove.

March 3, 1931

Today I hunted about the cultivated area near the ranch and over to the willow area near the levee. Nothing unusual was seen. I collected an Orange-crowned warbler from a few which were feeding in a willow tree. An immature Sharp-shinned hawk was shot while in flight near the date grove near Wallaces.

March 4

This morning I drove up to the lake about a mile above Potholes where I hunted in the willows and arrowweeds in that area. Audubon warblers were abundant, five being collected. A few gnatcatchers were seen and heard and a Western gnatcatcher was collected. The Red-tailed hawk was flushed from its roost in a large willow. A small flock of mallards were flushed from the lake at my shot. An immature Gambel sparrow was collected from the ground in company with a flock of Chipping sparrows which were common in the arrowweeds. A single Black phoebe was collected from its perch in a low willow near the lake. A Sparrow hawk was seen near the lake.

I collected a shrike on Keyser's place after returning to the ranch.

March 5

This morning I hiked over to the large wash north of the main canal and back and then hunted about the ranch and over to the levee. Nothing unusual was seen. I collected a male adult Sharp-shinned hawk near a corral near the Exp. Farm. A Savannah sparrow, a Chipping sparrow and a Vesper sparrow were collected near Dow's alfalfa field.

March 6

This morning I hunted about the ranch and over to the date palm grove east of Wallaces and then went over to the willow area east of the levee. It was very windy and birds were not common. A number of robins were seen about the date grove and a Sharp-shinned hawk was seen flying over. A few Audubon warblers were in the date palms.

In the willow area east of the levee birds were very scarce. A few gnatcatchers were heard and seen but weren't common. The willows are beginning to cut forth leaves and apparently have no "pussy willow" stage.

This afternoon I drove up to the lake 5 miles north of Potholes for the purpose of getting a few ducks. No ducks were on the lake, however, at my arrival. A few Black phoebes were seen about the lake and one was collected. A single

Vesper sparrow was collected near the lake shore. A large flock of Violet-green swallows were flying over the lake but I was unable to collect any. Two Rough-winged swallows were also seen. A few killdeer were seen on the shore and a flock of Least sandpipers was also noted. A Marsh hawk was seen flying near the lake. A flock of White robins were seen circling at a great height. After sunset a few small flocks of ducks flew into the lake some distance from where I was stationed. They appeared to be Teal and one small flock of probably Pintails. I was unable to get close enough to get a shot at any of them. At one time after sunset a small flock of cormorant flew past me in V-shape formation.

March 7, 1931

Had trouble with the Ford this morning and went to Bard to get it fixed. Worked on it all morning.

This afternoon I finished up my work and packed up in preparation for leaving tomorrow.

March 8

Left the ranch about 8:30 a.m. and drove through to San Diego arriving there about 3:00 o'clock p.m.

Samuel G. Harter

April 1 - April 11, 1931

Bard, Imperial County,  
California

April 1st, 1931

I left San Diego about 7:30 a.m. this morning in the Museum Model T truck with supplies for a ten day collecting trip to Bard, Imperial Co., Calif. The weather was clear and hot. I had lunch at El Centro about noon and arrived in Bard about three o'clock. I spent the remainder of the day moving into the house and cleaning up.

April 2

\* flocks  
This morning I drove up to the lake a mile above Potholes where I hunted til about noon. A few ducks were flushed from the margin of the lake where there were no tules. I was unable to approach them to gun range because of lack of cover. They appeared to be Pintail and Teal of some kind. There were a few large<sup>x</sup> of Least sandpipers along the shore and one was taken. A few flocks of pipits were flushed from the muddy ground along the margin of the lake and one was collected. Coots were heard calling in the tules. Two Wilson snipe were flushed from the soggy ground near the water. A few Black phoebes were seen along the lake. Several Audubon warblers were seen in the willows and one was taken. A Turkey vulture was collected from its perch on a dead willow in the lake. A Sparrow hawk was seen hovering over a grassy field near the lake. A large flock of Tree swallows were seen flying over the willows at the upper end of the lake and I was fortunate in collecting four of them. They seemed quite to ignore my shooting which seemed only to arouse their curiosity and drove them nearer to my gun. Three Western kingbirds were seen in the willows near the lake. Returning home I saw a pair of Rough wing swallows in a willow near Potholes. I collected one.

April 3

This morning I drove down to the lake about a mile below Bard. The day was quite warm and clear. The following birds were seen on or about the lakes:

Coots - 25 approximately; Eared grebe - 4; Great blue heron - 1; Black-crowned night heron - several; Green heron - 1; kingfisher - 1 collected; Farallon cormorant - 20 approx. 1 collected; Yellow-headed blackbird - common; Black phoebe - few in willows; Western snipe - 1 flushed from shore; Cinnamon teal - pair flushed from lake; Tule wren - common in tules; yellowthroat - several seen in tules; Ground dove - a pair on levee; roadrunner - on levee; Song sparrow - common; Mourning dove - several came to drink at lake.

April 4

This morning I drove up to the lake about 5 miles north of Potholes. Little was seen about the lake. There were however large numbers of Tree swallows flying over the lake. I was able to collect one. Several Chipping sparrows were

seen near the lake and one was taken. A small flock of Cinnamon teal was seen on the lake but I was unable to get any. I then drove back down to the lake about a mile above Potholes where I hunted in the willows. I got two Audubon warblers, two Pileolated warblers and a Ruby-crowned kinglet.

April 5, 1931

This morning I went up to the lake above Potholes where I hunted through the willows. Two Black-headed grosbeaks were seen but could not get a shot at them. Nothing else of interest was seen.

April 6

This morning I again went up to the lake a mile above Potholes where I hunted in the willows near the lake. A single Yellow warbler was seen and collected from a willow. A number of Chipping sparrows were seen and one was taken. Audubon warblers were common and two were collected. A few Ruby-crowned kinglets were also seen and two were taken. A few Warbling vireos were seen in the willows and 2 collected.

April 7

This morning I drove down to Lake Haughtelin about a mile north of Yuma. In a small slough near the lake a small flock of Cinnamon teal were feeding and I was able to collect a male. On the upper end of the lake several cormorants were seen. A flock of about a half dozen ducks were seen on the lake at some distance. They appeared to be Scaups with a single Bufflehead. The white on the back of the head was plainly visible and when they took flight white patches were seen in each wing. An osprey was seen flying over the lake and I took an unsuccessful shot at the bird. Nearby a flock of about thirty or more hawks were circling over the lake and adjacent willows much in the fashion of Turkey vultures. I collected one of the birds which flew within gun range. The rest of the flock did not fright but continued circling in their slow flight and drifted on. A single robin was seen near the levee about a mile north of Ft. Yuma

April 8

This morning I again drove up to the lake a mile north of Potholes where I hunted in the willows. On the way I stopped at the little pond near Potholes where I collected two coots from the tules of the pond. At the lake I collected two Least sandpipers from a good sized flock. Tree swallows were flying in large numbers near the lake and one was taken. A single Chipping sparrow was also collected. Two pair of Sora rails were seen in the tules bordering the small pond at Potholes.



April 9, 1931

This morning I drove up to the desert wash about 3 miles north of Potholes where I hunted for a short time. The Palo Verdes were laden with their yellow blossoms and the creosote was in full bloom. However, birds were scarce. I collected a verdin and a single Western flycatcher. A pair of Western kingbirds were seen and little else was noted. I then went back to the lake a mile north of Potholes where I hunted in the willows along the shore. A single female Green-backed goldfinch was seen and heard calling in the top of a willow and I collected it. Audubon warblers were quite common and two were taken. A few Warbling vireos were noted in the willows and one was taken. Vermilion flycatchers were frequently seen. Several chipping sparrows were noted and one taken. A few Western kingbirds were seen and one collected. A single female Gilded flicker was seen in a willow tree where it uttered its call. I was able to collect the bird. In the tules in the lake Tule wrens were abundant and I was able to collect one specimen. Three Cinnamon teal were flushed from the edge of the lake. A flock of about a dozen White pelicans were seen circling over the lake and several Farallon cormorants flew overhead.

April 10

This morning I went down to the lake about a mile south of Bard where I hunted for a short while. Little of unusual interest was noted. The usual coots, redwings, Yellow-headed blackbirds were present. Several Farallon cormorants were flushed. A single mockingbird was seen in the levee where he was perched in a willow, calling.

I then drove down to Lake Haughtelin where I skirted the upper shore. The lake was almost deserted except for a few cormorants and a single Great blue heron.

April 11, 1931

I left the ranch this morning at about six-thirty and drove to San Diego, arriving there about 2 in the afternoon. The day was arm and hazy over the valley.

Mojave Desert Trip

August 5 - August 28, 1931

G. S. Harter

(with Vernon Safford)

August 5, 1931

This morning Vernon Safford and I started out on a month's trip to the Mojave Desert area and the Argus Mts. to collect specimens for the Natural History Museum. We left San Diego about 7:30 a.m. in the Museum Model T Ford pick-up truck. We drove up the coast route through Long Beach to Los Angeles where we had dinner. We continued up to Saugus stopping to fill up with gas and oil near University City. At Saugus we turned onto the Mint Canyon road and drove until we reached Palmdale on the edge of the Mojave Desert about 6:00 p.m. We got a few provisions and then drove out of town on the Victorville road about 2 miles where we made camp among the tree yuccas. A strong wind blew from the south west all night. I set out my line of traps through the camp. The soil was sandy in character. At about 8:30 p.m. we ran over the trap line and found only 2 *Onychomys* and 1 *Dipodomys merriami*.

Aug 6

My trap yield this morning was 1 *Onychomys*, 2 *Dipodomys mohavensis* and one *Mus. musculus*. We prepared specimens and then packed up. Before leaving this country we drove slowly over cross roads in the desert in search of *Citellus mohavensis*. Several *Ammospermophilus* were seen and finally I saw a *Citellus* standin near a fence close to the road. I shot it with a 410 load. It turned out to be a subadult female. We then drove into Palmdale where we had breakfast and then got under way about 9:30 a.m. We made a stop at Lancaster where we bought such provisions as we were lacking. It began to grow very hot as the sun climbed to the zenith and we sweltered the rest of the day. The old Ford suffered as well and it became necessary to fill it with water about every other mile. We made a short stop at Mojave to mail post cards. At Freeman while stopping for water we saw a *Citellus mohavensis* run across a clearing near the road. Safford was lucky in collecting it although the shot broke the skull. It was a large, fat female and in gutting it I found 2 well developed embryos. We continued (boiling) on to Brown where we left the main highway. We made a grand filling-up with water and gas as this is our last chance for gas until we get to Darwin. Water is also far between. We filled everything we had with water and started out. It was about 21 miles from Brown to Mountain Springs Canyon over a very poor and rough road across a great flat plain and across a couple of dry lake beds. Wehn we arrived at Mountain Springs we again filled up with water and continued up the canyon which is very steep and about 4 miles long. The canyon is quite rocky with small willows and green bushes at the bottom. Several springs occur at intervals along the road. We gained altitude rapidly and upon reaching the top we came into a large forest of

Joshua trees (tree yuccas) which continued along the high crest. It was noticeably cooler up here. We at last came into view of Junction Flat, a wide flat valley west of the high Argus range. The ranch house is situated at the north end of the flat and as it was unoccupied we moved in. We arrived here about dark and had to do most of our unloading in the dark with use of the flashlight and lantern. We found 2 tanks of fresh water a short distance from the house. The water is piped to the tanks from some spring. As it was so late before we got moved into the house and finished supper I did not set traps out.

August 7, 1931

The night was quite cool and the morning dawned bright and clear. It did not begin to get warm until about 10:00 a.m. We spent most of the morning fixing up the house and cleaning up. About 10:00 Safford and I got our guns and started out on a hunt along the west side of the flat. We walked for about 3 miles along the lava bluffs that border the west side of the flat. The country was very rough and rocky and walking was difficult. The country looked ideal for ground squirrels but none were seen and no sign of any seen. A number of sage sparrows were seen in the bush over the flat. Several western kingbirds were also seen in the bush along the lava bluffs. A shrike, 2 mourning doves and several cactus woodpeckers were also seen.

This afternoon we drove up to Darwin which is about 15 miles north of Junction Ranch, to get some gasoline for running purposes and for the stove and lantern. On the way several *Ammospermophilus* were seen and while returning Safford shot one about 7 miles south of Darwin. The road is downhill almost all the way from here to Darwin. Darwin is on the north side of the large Darwin wash and flat. The flat is overgrown with creosote and is much warmer than where we are camped. We got back to the ranch about 5:00 p.m. and set out the mouse traps. I set out my line in the brushy area east of the ranch which slopes upward toward the Argus Range. This slope is dotted abundantly with tree yucca and is also quite brushy, the brush being low. The soil is loose and of mixed gravel and silt nature. A number of *Dipodomys* holes were noted but not much else in the way of sign. Safford set out his line in a south westerly direction from camp toward the lava bluffs. The area is covered with the sage *Artemisia tridentata*. We went over the trap lines about 9:30 p.m. and got 6 *Dipodomys* and 3 *Peromyscus maniculatus*.

August 8, 1931

This morning my traps yielded 5 *Dipodomys*, 3 *Peromyscus maniculatus*, 1 *Onychomys torridus* and 1 *Perognathus longimembris panamintinus*. Safford's line yielded 2 *Dipodomys*, 3 *Perognathus longimembris panamintinus*, 1 *Perognathus xanthonotus* and 1 *Peromyscus maniculatus*. We remained at the house all morning preparing specimens. This afternoon we drove up to Millspough in search of ground squirrels. The road goes up a steep rocky canyon. The ore mill of Millspough is near the crest of the range and the road is not passable beyond. However, we walked up to the crest from Millspough. From the top we got a splendid view of Panamint Valley and the barren Panamint Mountains. The entire country around Millspough is very rocky, the rocks being granite. Vegetation is scanty there being a sparse growth of tree yucca. We hunted for some time among the rocky hills and in the canyons but never saw a trace of a ground squirrel. If they occur in this country they are very scarce and quite local. We returned to the house about 4:30 p.m. and set out our traps. We set our traps along the west side of the flat opposite the house and along the lava bluff. Part of our traps were through the brush (*Artemesia*, etc.) where the soil is very fine and silty and part over the loose rocky silty soil which slopes up towards the lava rocks.

Aug 9

I took the following from my mouse traps this morning: 14 *P. m. sonoriensis*, 1 *P. c. stephensi* ?, 1 *Dipodomys merriami*, 1 *Dipodomys mohavensis* ? and 1 *Perognathus xanthonotus*. Safford and I worked specimens from traps until about noon. We then started out on another ground squirrel hunt. We drove the Ford up an old road to a canyon in the Argus range almost due east of the ranch house. From where we parked the truck we walked the entire length of the canyon to the crest where we could look down the east slope of the Argus Range into the arid Panamint Valley. The canyon up which we hunted was very rocky and steep. The slopes of the canyon and adjacent peaks are well covered with a growth of Pinyon pines. A few tree yuccas grew up to the crest. At the lower end of the canyon there is a small spring with a number of willows growing round it and other green shrubs. There were a number of red-flowered bushes here around which were numbers of Rufus hummingbirds. At the spring we flushed about fifty mountain quail, most of which were immatures. Two mourning doves were also seen there. In that canyon several rock wrens were seen. At the crest two white-throated swifts were seen flying about catching insects. A Pinyon jay was also seen there. Our hunt today covered one of the principal canyons of the range of mountains for its entire length and not a trace of a ground squirrel was seen or heard. It is beginning to look as

though we will have considerable work to even locate them let alone collect them. We returned to the house about 4:30 p.m. and went for water at the tanks just north of the ranch. Early this morning while picking up our traps we saw a large flock of pinyon jays fly across the north end of the flat. They were calling incessantly. This evening we set out our traps across the flat through the Artemesia toward the lava bluffs.

August 10, 1931

My trap line held 1 *Perognathus l. panamintinus*, 3 *Onychomys torridus* and 4 *Dipodomys mohavensis*?

We prepared specimens this morning. Set out the gopher traps in the flat near the lava bluffs.

This afternoon we drove down toward the Darwin Wash then took a small side road up into the Argus Range. We drove up the road until it became too steep then walked up to Peterson's mine. The mine is situated in a rocky canyon just at the lower limit of the pinyons. Mr. Peterson told us he had seen ground squirrels about the place but a thorough hunt failed to locate any. While returning we saw a large flock of pinyon jays about a half mile north of the house.

We again set our trap lines across a flat towards the lava bluffs. Our gopher traps yielded only 1 *Thomomys*. It clouded up all day and the evening we had some light showers.

Aug 11

The trap yield was small. I got only 4 *Dipodomys mohavensis*? and 4 *Peromyscus maniculatus*. We prepared specimens this morning.

This noon we visited the gopher traps and finding only 1 gopher we changed the sets.

This afternoon we drove up to Millspough and hunted down Shepherd Canyon about 2 miles. At the upper end of the canyon about a half mile below Millspough we saw our first ground squirrel on a rock. The silvery-white shoulder patches first attracted our attention as they were very prominent. The ground squirrel almost immediately ran down the rock and disappeared in the brush. We never saw him again nor did we see any others. The canyon is narrow with many large granite boulders and rocky ledges, quite suitable for ground squirrels but they were quite devoid of life. A small owl was found dead in the sandy creek bed and was saved as it seemed quite fresh. We returned to the ranch about 4:30 p.m. and I visited the gopher traps finding 1 gopher. No traps were set tonight as we are planning to hunt the Shepherd Canyon all day tomorrow. It has been quite cloudy and cool today with a few light showers.

August 12, 1931

This morning we prepared a few specimens and then went up again to Shepherds canyon where we hunted until noon, covering a great area. No ground squirrels were seen. Nothing else was seen except a small flock of mountain quail, a raven and a large hawk, probably rough-leg. This afternoon we drove down to Darwin for supplies. The roads near Darwin had been all washed out by a cloud burst the night before. The weather was cool and cloudy all day.

This evening we set out our mouse traps up into the lava bluffs opposite the ranch.

Aug 13

My traps held 1 *Dipodomys mohavensis*?, 1 *Peromyscus crinitus* and about 30 *Peromyscus maniculatus*. One *Thomomys* was also found in the gopher settings. We made up skins and cleaned up the house this morning.

This afternoon we drove into the Coso Mts. which lie along the west side of the flat. We met an old miner who has a mine not far from this flat who said that he had never seen ground squirrels in the Cosos. We drove about 8 miles on the road to Cold Springs but saw only a few *Ammospermophilus* and secured one. We were caught in a heavy rain but got out of it o.k. This evening we set out traps through the brush south of the ranch and east of the road.

Aug 14

My traps held 1 *Onychomys*, 6 *Dipodomys mohavensis*? and 1 *Neotoma*. There were also a few *Peromyscus maniculatus sonoriensis* which were not prepared. As usual we prepared specimens in the morning. We spent a little time this morning helping out a party of 2 miners that were stuck with wheel trouble near the ranch.

This afternoon we drove up to a small canyon on the side of the Argus Range where we hunted but found nothing.

Traps were set out tonight through the brushy and rather gravelly & rocky ground northeast of the house.

Aug 15

The traps yielded 2 *Perognathus* sp., 5 *Dipodomys mohavensis*? and 3 *Peromyscus maniculatus sonoriensis*.

We prepared specimens this morning and later took baths at the tanks and washed clothes.

This afternoon we drove down to Shepherds Canyon where we hunted along the rocky sides and adjacent canyon about 3 miles down. No ground squirrels were seen. Safford shot an *Ammospermophilus*. I saw one among the rocks. Several rockwrens and desert sparrows were seen in the canyon. This evening traps were set in the brushy area north east of the ranch house, a little east of the area trapped last night.

August 16, 1931

My trap yield this morning was small there being 1 *Perognathus* 1. *panamintinus*, 1 *Perognathus* *peinsulatus*?, 2 *Onychomys* *torridus*, 4 *Dipodomys* *mohavensis*?. The P.1. *panamintinus* and 1 *Onychomys* were discarded because of broken skulls. Specimens were prepared this morning. We left the ranch about noon and drove down to La Motte Spring which is in a rocky canyon south of Junction Flat. We hunted about there for a while but found nothing. We then drove over to Cold Springs in the Coso Mts. to look for ground squirrels as an Indian told us yesterday that he thought there might be some in the pinyon covered hills above the springs. We hunted for some time among the pinyons but never saw a sign of a ground squirrel. I collected a sage sparrow from a pair I saw in the sage near the pinyons.

Aug 17

This morning we packed up and left Junction about 9:00 a.m. We pulled into Keeler about noon where we bought a few provisions and got water. We then drove out of town about 4 miles north where we made camp by the side of the road. It was very hot this afternoon but it cooled off nicely this evening. The wind blew hard from the south all afternoon, but also abated at sunset. This evening I set my traps through the sandy dune north east of camp. about parallel with the sand road. There is considerable brush growing on the sand. We looked at our traps about 9:30 p.m. and found many sprung by the large *Dipodomys* *deserti*. Two were caught in traps and one was caught by lantern light. A few *Dipodomys* *merriami* were also caught. Safford's line held an *Onychomys*.

Aug 18

My traps held only a few *Dipodomys* *merriami* and 1 *Onychomys* *torridus* claws. This morning we put up specimens and set out gopher traps in the grassy flats near the lake bed. The strong south wind started up about 9 a.m. and blew all day, dying down at night. This afternoon our gopher traps yielded 3 gophers. I set out my trap line in the brushy area



at the edge of the large sand dunes.

An *Onychomys* and a few *Dipodomys merriami* were taken from the traps tonite about 10 p.m. Three *Thomomys* were taken from the gopher sets that evening.

August 19, 1931

My traps yielded 2 *Onychomys torridus* and several *Dipodomys merriami*. The gopher traps had nothing this morning. We made up skins all morning and then changed the gopher traps. The wind blew all afternoon and it was quite hot. We ran into Keeler about 4 p.m. for water and saw a Golden Eagle near road. We visited the gopher sets this evening and found two *Thomomys* sp. Reset these traps.

We set out our mouse traps in the sandy brushy country east of the road this evening.

Aug 20

This morning I took 2 *Onychomys torridus*, 1 *Perognathus* sp., several immature *Peromyscus* and several *Dipodomys merriami* from my traps. The gopher traps yielded 1 *Thomomys*. We skinned until about noon. This afternoon we went to Lone Pine for supplies and reset the gopher traps. This evening Safford set his mouse traps in the sandy area east of the highway while I set mine along the edge of the dunes west of the road. When we went over our lines about 9:30 p.m. only one *Dipodomys merriami* was found.

Aug 21

This morning my trap line yielded 1 *Onychomys torridus* and several *Dipodomys merriami*. I also took 3 *Thomomys* sp. from the gopher traps. We skinned up what little we had and then packed up. We left our camping place about 11 o'clock. About 5 miles outside of Lone Pine the speedometer ceased working. We drove down the highway to Freeman where we turned up toward Walker Pass. On the road up Freeman Canyon to Walker Pass we fixed the speedometer. Camp was made in the canyon in a heavy growth of tree yucca. We are located about a half mile from the top of the grade and about 100 yards south of the highway. We pitched camp immediately after arriving about 3:30 p.m. and then drove about 3 miles west for water and gas. This evening we set our traps through the tree yucca down the canyon. Safford following a draw and I setting on higher ground. The ground is gravelly in nature and there is a great quantity of rodent sign.

We also made 8 sets for wood rats in the tree yucca clumps about camp. I visited my traps about 9:30 and found only 2 *Dipodomys mohavensis*?

August 22, 1931

The trap yield was small this morning. Only 4 *Dipodomys mohavensis* were caught and 2 had broken skulls and were discarded. I also caught 1 *Peromyscus maniculatus* which had a badly broken skull. Nothing in *Neotoma* sets. Safford caught 2 *Neotoma* and 4 *Peromyscus maniculatus*. After making up our specimens we drove down toward Onyx where we hunted for ground squirrels and collected one immature male in the rocks about 9 miles east Lone Pines. We went to Onyx for sugar is we were out. We learned that Walker Basin is about 40 miles from our present camp and is not the valley that Huey marked on our topographic map.

This evening we set our mouse traps through the tree yuccas and brush along a sandy wash in Freeman Canyon about 3 miles below our camp.

Aug 23

My trap line yielded only several *Dipodomys mohavensis* and 2 *Dipodomys merriami*. We made up specimens all morning and remained about camp in the afternoon. About 4 p.m. we drove down to the filling station for water. We set our traps this evening near the mouth of this canyon at the lower edge of the tree yucca. The traps were set over sandy soil which was well overgrown with large green small leaved bushes such as grow along washes in this country.

Aug 24

My trap line yielded 3 *Onychomys torridus*, 1 *Perognathus longimembris*, 1 *Reithrotonomys megalotis* and about a half dozen of *Dipodomys mohavensis*. We as usual made up specimens until noon. This afternoon we drove down to Onyx for supplies and also to hunt for ground squirrels in the cultivated area along the south fork of the Kern River. No squirrels were seen however. Two different natives told us that there had been recently an extensive ground squirrel poisoning campaign which no doubt accounted for their scarcity at the present time.

This evening traps were set out through the tree yucca and brush association about a quarter of a mile below camp.

Aug 25

This morning my traps produced 1 *Perognathus longimembris* and 2 *Dipodomys mohavensis*. I can't understand why the catch should be so small as rodent sign is apparently abundant. We made up specimens and then packed up preparatory to moving.

We left camp about 11:00 a.m. We drove directly to Palmdale stopping at Mojave for lunch. We arrived at Palmdale about 3:30 and pitched camp about 2 miles east of the town.

August 26, 1931

This morning we hunted *Citellus mohavensis*. We drove over the dirt roads which criss-cross this entire section. We found the *Citellus* to be most common about the fruit orchards. They did not have their burrows in the orchards, however, but lived in the brushy areas adjoining the orchards. We were fortunate in shooting 4 *Citellus* today. We also shot several *Ammospermophilus* which are abundant.

This afternoon we put up specimens and went after water.

Aug 27

This morning we again hunted *Citellus*. We did not have so much luck as yesterday, only securing 2 *Citellus mohavensis*. We also shot 2 *Ammospermophilus*.

We made up the specimens this afternoon.

A cactus wren is completing a nest in a low limb of a Joshua tree close to camp and has picked up bits of stray cotton for a lining of its nest. The bird roosts in the nest during the night but does not frequent the nest during the day. Perhaps our presence keeps the bird away. Only one bird has been seen at the nest at one time.

Aug 28

This morning we got up early and broke camp, loaded up the truck and started home. We made good time stopping in Long Beach for lunch. We arrived in San Diego about 3:30 p.m.

Mojave Desert Trip

August 5 - August 28, 1931

V. Safford

(with Sam Harter)

August 5, 1931

Left San Diego at 7:30 a.m. with a clear sky and little wind to make it an ideal day for traveling. We drove up the coast through Long Beach and to Los Angeles. There we stopped for lunch and a hair cut. After eating we proceeded on our way to Universal City where we filled up with gas. From Universal City we went to San Fernando then to Saugus and from there to Palmdale. At Palmdale we got a few needy provisions. We then proceeded east from Palmdale 2 miles on the road to Victorville where we camped for the night. A much needed dinner was prepared at the camp. This camp was situated in a large growth of Tree yuccas. These tree yuccas cover the whole floor of Antelope Valley in which Palmdale is situated. Traps were put out as the sun was dropping behind the hills and the beds were unrolled for the night. About 8:30 the traps were looked at and netted us 1 *Dipodomys merriam*, 2 *Onychomys*.

Aug 6

Awoke early, looked at the traps which produced 2 *Dipo. mojavensis*, 1 House mouse and 1 *Onychomys*. After taking up the traps we ate breakfast and prepared the specimens. We left Palmdale at 9:30 and headed for Lancaster where we bought more groceries for our stay at Junction Pond. From Lancaster we went to Mojave where we mailed some cards. From Mojave we went to Freeman where a specimen of *Citellus mojavensis* was taken along the road. This one was a large female with embryo. She was shot from the highway. From Freeman we went to Brown which is where the main highway going north to Owens Lake and Independence. At Brown all water containers were filled for the trip across to Mountain Springs Canyon. At Brown the main highway was left behind and we headed east for the Argus Mtns. and Junction. We crossed the desert flats 21 miles over a very bumpy road to Mtn. Springs Canyon. Then we went up the canyon which was very steep and the road was very narrow and in spots very rough. There were several springs in this canyon where we could get water. The canyon was about 3 miles long and at the top the road was leveled off onto a flat. Between Brown and the Mtn. Springs Canyon the radiator boiled eventually and had to be filled every mile or so. From the head of the canyon we proceeded to Junction Ranch, a distance of about 9 miles, fairly level and with a good road. At Junction Ranch we found a house with four rooms, good water and some shade. We moved into the house just as it was getting dark.

August 7, 1931

Most of the morning until ten o'clock was spent in cleaning up the house and getting ready to work the country at hand for specimens. At 10 a.m. we started along the west side of Junction Flats and worked high up into the rocks and along a bench. We saw no signs of *Citellus beecheyi* *Parmelus* for which we were looking. We got back to camp at 12:30 and had lunch and then started to Darwin to get gas. The road to Darwin was fairly good as cow trails go. We accomplished the 16 miles in about one hour & fifteen minutes. At the gas station in Darwin we talked with a man who has a mine high in the Argus among the pinyons. This fellow tells us that he had seen many squirrels at his mine, so very likely they live up in the pinyon belt. One *Ammospermophilus leucurus* was collected on the return trip from Darwin about seven miles south of that town. When we got back from Darwin it was 5 o'clock and time to set traps. Sam and I each set 60 traps. His line ran from the house east into a grove of Tree yuccas while mine ran west from the house and across a big flat sparsely covered with Treeyuccas and having a good cover of *Artemesia*. From this flat the line went west up the west slope of the valley into a lava rock bed. These traps were looked at in the evening about 9 o'clock and from the traps were taken 6 *Dipodomys* and 3 *Peromyscus maniculatus*. This was the whole catch for Sam's and my line in the evening.

Aug 8

The traps were taken in before sun up yielding 5 *Dipos.*, 3 *Peromyscus*, 1 *Onychomys* and 1 *Perognathus longimembris panamintus* in Sam's line. My line contained 2 *Dipodomys*, 3 *P. i. panamintinus*, 1 *Perognathus xanthonotus* and 1 *Peromyscus*. After the traps were taken in we ate and then put up specimens until 12:00. We then went out to hunt for *Citellus beecheyi parvolus*. We drove the Ford to Millspaugh, the scoured hills high above that place. We worked up the main slope of the Argus Mtns. to the top. From the top of the Argus range the whole Panamint Valley could be seen. Millspaugh was as far as we could drive, for the road became much too washed & steep for travel. We returned from the trip unsuccessful, having seen no sign of the coveted *Citellus*. Tonight we set traps again all along the west side of Junction Flats.

Aug 9

This morning we had fair luck in our traps. Mine contained *Dipodomys*, *Perognathus xanthonotus*, *Peromyscus crinitus stephensi* and *Peromyscus maniculatus sonoriensis*. Put up specimens until 11:00, then we went out to hunt for the much

wanted *Citellus b. parcolus*. We climbed up the west slope of the Argus clear to the top. This trip took us well up into the pinyons which cover the entire north side of the mountains. When we got to the top of the Argus Range we could see the Sierras far to the west. No signs of the squirrels were found anywhere. We are rather at a loss just what to do and where to look as we have covered much of the territory in the Argus range. Tonight we set traps again across the flats in front of the ranch house. Two White-throated swifts were seen while we were at the top of the mountain. They were flying around over the canyons apparently catching food. Also this morning a large flock of Pinyon jays were observed in the valley. Last night the coyotes stole all the rat bodies that we had thrown out very near the house. We heard them during the night and found their tracks this a.m. Saw the tracks of a wild cat in a horse trail this morning. There are quite a few wild horses in the hills around here and a large herd of wild jacks right in the valley near the ranch house. Have seen no one since we arrived here the 6th and there has been no one through the valley. Cars are scarce on this road.

August 10, 1931

Put up specimens as yesterday morning, nothing caught new. Nothing of interest all day. Have as yet seen no squirrels

Aug 11

Got 3 gophers today. Caught nothing unusual in the traps. This noon we went down Shepherds Canyon and saw our first *Citellus beecheyi parvelus*. Could not get him tho, he was too wary. We are beginning to lose all hope of getting any of these squirrels because they are so scarce. The hills are very steep here, in fact so steep that it is very hard on one to climb a 100 yards. Tonight we put up a few skins. We found a dead owl today in the wash in Shepherds Canyon. He will make a good specimen.

Aug 12

Put up two *Thomomys* this morning. 9:10 found us in Shepherds Canyon again hunting squirrels. Went over all the country for a great distance down and around the canyon. Saw no squirrels but killed two Mountain quail. We went to Darwin this p.m. for more supplies for which we were sorely in need. Also mailed a few letters. Saw a pair of Western bluebirds on the way to Darwin. Set traps again tonite.

August 13, 1931

From the traps this morning were taken but 2 kinds of rodents, *Peromyscus* & *Dipodomys*. We got an exceptionally large number of *Peromyscus* because the traps were set in the rocks on the west side of the valley. This afternoon we went into the Coso range of the mountains to hunt squirrels but got nothing except one *Ammospermophilus*.

Aug 14

We got *Neotoma*, *Dipodomys* and *Peromyscus* from the traps last night. This afternoon we hunted in the Argus range for *Citellus* but saw nothing of them. Killed a rabbit for dinner tonight.

Aug 15

Took 2 of a new species of *Perognathus* from the traps this noon. Also got *Dipodomys* and *Spermophilus* in large numbers. This afternoon we again hunted down Shepherds Canyon, Sam on the west side and myself on the south. We hunted very thoroughly but the trip netted us but one *Ammospermophilus*. We set traps again tonight.

Aug 16

Put up *Dipodomys*, *Peromyscus truei*, *Ammospermophilus* and *Perognathus* this a.m. This afternoon we went to Lamotte Spring and Cold Spring over in the in search of Ground squirrels but found none. Collected a Sage sparrow and saw several Pinyon jays near Cold springs. Lamotto Springs was very dirty as rats had been feeding near and watering there.

Aug 17

Packed up this a.m. and left the Junction for Keeler in the Owens Valley. Were very sorry to leave Junction without having collected any *Citellus b. parvoles* at all. The trip to Keeler was 47 miles. Set traps tonight about 4 miles north of Keeler where our camp is situated. The traps were set in the dunes between the old beach of Owens lake and the railroad tracks.

Aug 18

Traps contained *Dipodomys deserti*, *Dipodomys merriami* and one *Onychomys*. Put up these skins right after breakfast. Set gopher traps at noon. This evening took 3 gophers from the traps. Set mouse traps again tonight along the west side of the R.R. tracks. Went out to the traps before bedtime tonight and got one *Onychomys* and several *Dipodomys merriami*.



August 19, 1931

Took one *Perognathus* and one *Peromyscus* and many *Dipodomys merriami* from the traps this a.m. Put up *Perognathus*, *Onychomys* and *Dipodomys* skins this a.m. After taking care of the skins set gopher traps around noon. It was a fairly warm day and the wind blew from the south west across the lake. We are camped on a sand dune & the sand flies in the tent. We took two male gophers from the traps which we had set at noon in the grass on the old lake shore. At 6:00 while we set traps again at the bottoms of the dunes to escape the *Dipodomys deserti* which are very common here. After this we ate dinner. On the way out we saw 4 coyotes on a road near camp.

Aug 20

This a.m. I took 2 *Onychomys tonidas*, several immature *Peromyscus*, several *Dipodomys merriami*, *Dipodomys deserti* from the traps. Put up these skins before noon and reset the gopher traps which yielded 3 gophers this a.m. This afternoon we went to Lone Pine for supplies and water. When we returned I set my traps on the east side of the R.R. track along the base of a hill where there are several marble quarries. Traps yielded nothing except *Dipodomys merriami* tonite when we looked at them before going to bed.

Aug 21

Took several *Dipodomys merriami* from the traps this a.m. which was all I got. Took 3 gophers from the traps and took in the traps. We put up specimens til 9:30 then we went about picking up to move to Freeman Pass. We pulled out at 11:00. When we got to Olancho we stopped for a quart of oil and a bite to eat. We went quite slow for a Ford is no speed demon and arrived in the tree yucca belt in Freeman Canyon about 3:30 p.m. After we had set up camp we went for water down the west slope of the pass and returned at 5:00 after which we ate supper. At 6:00 we went out to set traps and I set mine in and near the wash that runs down Freeman Canyon. Tonite I took *Peromyscus* along from the traps when I looked at them at 9:30.

Aug 22

Took *Dipodomys* and *Peromyscus* from the traps this a.m. No *Perognathus* were taken. I put up the specimens which were very few and then went through Walker Pass down toward the Kern River. We found in stopping at a garage that Walker Basin was some 40 odd miles from where we are camped so we did not get down there. We collected a ground squirrel about 9 miles east of Onyx on the Freeman-Bakersfield road. This p.m. we set traps about 2 miles down from the pass in the middle of the tree yucca belt in hopes of collecting *Perognathus xanthonotus*. They were (the traps) placed in the wash and near it where the ground is sandy.

August 23, 1931

Took many *Dipodomys merriami* and *Dipodomys* --- from the traps this a.m. also some *Peromyscus*. Put up specimens til noon. The day was very warm, much more so than usual.

Tonite we set our traps in the lower end of the tree yucca belt in Freeman Canyon in a new and very different association.

Aug 24

Took *Dipodomys*, *Perognathus penicilatus* and *Onychomys* and *Peromyscus* from the traps this morning. Put up specimens until noon then went to hunt squirrels down toward Onyx and in the Death Fork valley of the Kern River. We got no squirrels even as much saw one. We bought a few supplies at Onyx and then came back to camp & set traps. We placed them tonite again in the center of the yucca belt in and near the bottom of Freeman Canyon.

Aug 25

This a.m. we took one *Perognathus penicilatus* from the traps and many *Dipodomys*. Put up these specimens and then packed up and left for Palmdale. We went to Mojave & stopped for lunch & then went on to Palmdale, a distance of 85 miles.

Aug 26

Hunted *Citellus* all morning and then put up specimens in the afternoon, some *Citellus* and some *Ammospermophilus*. The *Citellus* were very scarce. Saw several ravens on wing today & 2 large flocks of crows.

Aug 27

Hunted again this am and this p.m. Put up specimens. The *Citellus* were almost impossible to get. The days have been very hot here, 110° as a rule. *Ammospermophilus* are quite common. We saw many wherever we went. Saw many ravens this a.m. A cactus wren has built a nest in a Joshua tree under which we have been camped. She has picked up some bits of cotton near the tent and included them in her building.

Aug 28

We started home this a.m. all went well with the truck and load. Got gas in Long Beach and also a quart of oil. Took lunch in Long Beach and then continued on south. The time it took us to come home with the equipment was about 82 hours for the 200 miles from Palmdale to San Diego.

White Mountains of Arizona

Huey with Karl Kenyon, Turlington Harvey and Sam Harter

started June 21, 1933 was supposed to  
be six week's trip, however, notebook stops on June 25th.

June 21, 1933

Left San Diego at 1:25 p.m. The party consisted of Karl Kenyon, Turlington Harvey, Sam Harter and myself and we were outfitted for a six weeks trip in the White Mountains of Arizona.

After an uneventful run of twelve hours we stopped for a few hours sleep near Gillespie Dam. While the afternoon and evening had been uncomfortably warm, the early morning was decidedly pleasant and we rested well.

Several jackrabbits, many dipodomys merriami and numerous Perognathus were seen on the highway but not a single snake.

June 22

started out at sunrise bound for Phoenix and breakfast. Enroute we saw many white-winged doves, mourning doves and desert quails. Near Gillespie Dam 1 pair of blue grosbeaks.

Made our toilet at a Standard oil station and had breakfast at a little hole in the wall. Went to the P.O. to get cards, stamps, then to the Ariz. State Game warden. Made the most pleasant contact in that office & believe I have cemented our friendship. Purchased a fishing license each for Karl and Turlington for \$6.00.

Left Phoenix at 10 a.m. arrived in Globe 2 p.m. had lunch, purchased a few last supplies and went on. Passing through the San Carlos Indian Reservation we all commented at the queer wigwams of the Apaches. Our route led then to the northward towards the Mogollan Plateau.

After several stiff hills we encountered a grade that lifted from the Sonoran zone well into transition amid the yellow pines. Birds were scarce in fact over several miles of mesa we saw only a single shrike.

I had a surprise sprung on me when the boys both broke out sling shots. These were taken to replace the forbidden 22 rifles. However, their marksmanship was soon demonstrated when a large buzzard was taken near Oak Spring at the foot of a steep grade.

After a great deal of up and down grade we reached White River at sundown. Here I met Mr. Donner, the agent for the Apache Reservation and a most cordial person he proved to be. He gave us a written permit to camp and collect on the reservation. The night was spent 6 or 8 miles up the road towards McNary.

June 23, 1933

Hard rains had fallen yesterday over the higher parts of the mountains & evidence of the precipitation in large pools was to be seen as we neared McNary.

Here we found a settlement fostered by a large saw mill. In the log pond a small colony of redwing B.R.'s were breeding. Sam shot 3 males & 1 female. Meadows about the pond were well populated with microtus & probably other small mammals. While in the water a very peculiar fish was seen. The creature having long clawlike front fins. We were told that "water dogs" were not uncommon about the pond.

After having the car gassed & greased we drove along the main highway towards Springerville for a distance of 12.3 miles then we turned off on a lightly traveled wood road a mile or more. A fine rushing stream was found. This was later found to be the north fork of White River.

Camp was established nearby on damp muddy ground.

The truck was bogged twice before we were finally settled.

After the tents were up & we had lunch exploration began.

Sam and I went downstream while Turl & Karl went out east of camp. Our afternoon was not very fruitful. We killed almost all the birds we saw. A couple of violet-green swallows, 1 woodpecker and 2 long-crested jays were observed.

Karl found the nest of a n/4 western flycatcher near camp. It was located on a small rocky bank near the stream.

In the evening at sundown 4 or 5 night hawks were seen flying high over the tree tops. Sam & I each set a short line of traps amid the birches near the stream.

June 24

Our traps held a surprisingly good catch - 2 Zapus, 8 Microtus & 1 Peromyscus. A Cooper hawk was seen flying over at breakfast.

After breakfast Sam & I set down to prepare our specimens while Turlington & Karl went hunting. Karl returned shortly and went then to his flycatcher nest to collect the set and parent bird.

The local Indian Game Warden hearing the shooting came into camp and demanded Karl's gun. I talked to him but he seemed hard to convince even when our letter from Mr. Dorner was shown to him, with the excuse that he had left his glasses in his camp. At any rate he forbade our shooting until he could check up on us.

Later Turlington came in with 3 Williamson sapsuckers.

Shooting being forbidden, Turl. set a dozen mouse traps for chipmunks.

About noon the sheriff from McNary drove into camp. He had seen the game warden & had phoned to Mr. Dorner and verified our permit. In mid-afternoon the game warden returned and everything was rosy. Before he left he promised to show us a beaver dam and a mallard duck's nest. He also told me how & where to get a turkey.

We set our traps along the stream amid the birches again this evening.

Just after dark the boys heard a trap snap & upon investigation found a shrew in my line.

This afternoon after the warden had sanctioned resumption of our hunting Turl & Karl went hunting. Karl came in with a female hermit thrasher's nest & 4 eggs, 1 Rocky Mtn. hairy woodpecker and 1 violet green swallow. Turl. got another chickadee.

June 25, 1933

Our trapline held 7 microtus of 3 apparent species - two for sure. After breakfast we all went hunting. Karl & Turl. went up the river and in through the pine forest. They killed several chipmunks, 1 Williamson sapsucker, 1 male western tanager and 1 arctic woodpecker. The latter two were taken for the Museum coll.

Sam & I struck out south of camp in search of turkeys. While walking quietly through the woods we saw & heard many Williamsons sapsuckers, several w. robins, several long-crested jays and a few violet-green swallows. I saw a single Audubon warbler flying into the tiptop of a tall silver fir. Several juncos (red-backed) were found on the Mt. sides.

Near a saddle between two peaks I jumped a turkey but unfortunately my attention had been called by a very tame chipmunk and I did not see the turkey until it was flying 80 yards from me. On our way back to camp we got 4 long-crested jays and 1 red-naped sapsucker. The latter had a bill full of bugs apparently feeding young.

The boys had also caught 3 tiny mallard ducklings which after I made a few pictures were returned to their place where they had been found, much to the displeasure of the boys who wanted to keep them for pets.

They did not get back to camp until after 9 p.m. and we were somewhat worried.

Señora Natividad de López

Next of Alamo Bar

south of Sonoita, Sonora, Mexico

February 6 - 28, 1934

February 6, 1934

Left San Diego at 3 p.m. with H. Lowe, Lorenzo Cook and Phil Lichty bound for Georges Bay, Sonora, Mexico.

The day was bright and clear and our trip to Yuma was uneventful. A few fresh fruits were purchased in spite of the late hour it being about 9:30 Eastern Mountain time. After supper we set out for Gila Bend arriving at 12:30 midnight. Camped on the outskirts of the town.

Feb 7th

Up at the crack of dawn and into town. At an oil station we found a person who informed us of conditions below the border. We were told that fish trucks were running though the road was not the best.

The route from Gila Bend to Ajo was very scenic & interesting biologically. A very definite change in flora was found when the hills to the south of the bend were entered. Giant cactus became thick and the lava strewn hills were covered with Palo Verde. About 10 miles north of Ajo the first Organ cactus were found. These cacti were columnar in shape and had a great number of stems arising from a central root. Through this region the desert growth was abundant, more so than any place I have ever seen in the Southwest. The lava mountains were serrated and one particular range was of exceptional beauty, rising in domes and spires directly from the cactus covered plains. This I believe is called Montezuma's Head and would make a beautiful photographic subject had I but had the time.

While we were running along over a smooth graded road a coyote sprang out from the ditch by the roadside and crossed directly in front of the car, so close that the front wheels almost struck him. A blast of the horn did little to frighten him though. I believe a gun shot would have had a more accelerating effect.

Birds were not common but the lack of observation was probably due to our speed. However, numbers of Phainopeplas were seen along the road perched atop of the mesquites.

At Ajo we found a dead mining town with a few weary souls either too poor to move out or holding federal jobs. Ajo being the U.S. Port of Entry and seating the usual corps of federal officials.

I looked up Mr. Snyder, the Postmaster, who had been kind enough to reply to a letter sent him asking conditions of our projected route. He proved very affable and gave such information as he could about roads etc.



A forty mile run through this verdant desert growth brought us to Sonoita where we bought our last gasoline and found the Mexican officials very friendly. The only formality was a check made of our car and the numbers of the tires taken. These are to be checked upon our return. While they were reading my permits a Mexican soldier stated that he was to be our passenger to Rocky Point and brought out his rifle, bed bag and box of groceries. As the truck was already overloaded the groceries were left behind and he found a seat astride the front fender. This we all thought to be uncomfortable for him and we offered him such room inside as was available. This he declined saying that he was a soldier and must face hardships. His name was Armando Coloca M. and he spoke good English so that helped.

A few miles below Sonoita we came to a small town where Armando directed us to the bureau of immigration. Our papers were again read and notes taken. This as at Sonoita with little delay, surely seems like old times to pass so easily.

For the next 25 miles in a southerly direction our route ran through forests of Giant cactus, cholla, bristling with white spines and the usual growth of Ironwood mesquite. Creosote etc. growing in profusion amid rather rolling rocky hills. Numerous small desert ranges jutted up sharply over the landscape giving the skyline an irregular appearance. Far to the westward the tall Pinacate range lifted its rugged crests in the sky. The even-shaped pyramid peak called Carnega Peak could easily be picked out from the rest of the higher parts of the range. The road had been hard so far tho numerous cross washes forbid any speed whatever and took so much of my attention that few birds were seen. Entering a wide flat valley we had our first taste of sandy road tho little did we know what the next few hours were to bring.

A lone Red-tailed Hawk perched on a mesquite near the road (25 miles from Rocky Point) and numerous Round-tailed Ground squirrels were seen.

The vegetation began changing with the sandy valley and creosote predominated. The cactus passed and in a few miles towards the sea were entirely missing. As we were crossing a small wash I saw a small snake in the road. Stopping quickly Cook seized the reptile much to Armando's consternation.

Just about sundown we plunged headlong into the sand and what a grind it was. Boil, boil and more boil with little water to spare and no place to stop. All hands out to shove & how our soldier passenger did earn his passage. However hard these fellows outside worked the fellow at the wheel had his troubles, too, for its no easy task to keep a heavy car

in the ruts and enough headway to plow through the sand. We arrived at a windmill to find the thing running but not pumping. A small amount of dirty water was in a trough and with this we filled the radiator and an empty jar.

The setting sun found us again on our way but not for far for road conditions grew rapidly worse and soon evidence of brushing was apparent. A slightly rising sand hummock proved our undoing and the truck settled down onto the running boards and gas tank. Darkness set in, flash light failed to work, and a boiling engine -! Such a night! However, all were cheerful and with plenty of brush and a good shovel we were again rolling. Not for far, however, for another sand pit was soon encountered. Brush, more brush, shovel & more shovel - 12 long miles thru the sandy road that was just hard enough to run through. Wide open, in compound low, poor old Ford will it ever stand the return trip. Mile after mile two of the boys ran & pushed, then hopped onto the running board to rest at each opportunity.

As we were driving along about 10:30 p.m. a Prairie Falcon suddenly fell blinded in the center of the road directly in front of the car. This peculiar phenomenon was explainable, however, for during the strain of keeping the car going in the sand the spotlight had been shooting its beam obliquely upward and the bird's line of flight had crossed it grounding the falcon.

We arrived at Rocky Point about midnight and after a piece of homemade pie compliments of Phil Lichty, we turned in, a mighty tired and worn out bunch.

February 8, 1934

We were awakened by passing natives chatting with Armando who had failed to find quarters at midnight so stayed in our midst.

A beautiful wide bay greeted our eyes with one large modern fishing boat and a score of nondescript craft afloat and on the beach.

Like San Felipe which lies directly across the gulf to the westward this village makes its living by fishing tho the huts are composed mainly of rocks instead of brush. A larger building of rock masonry that had seen better days bespoke of a broken hope of an enterprising innkeeper who had staked his all on hunter tourist trade during the heyday of 5 years ago. Fire had burned out the roof and the present occupants have replaced it with corrugated iron and torn up tents - a pretty patched up job.

After breakfast the officialdom of the village were presented by Armando and again our papers were scrutinized and later copied. However, there was no question as to their quality and no objections made.

Lowe and I then walked to the top of the nearby hills to scan the region for possible camp sites. Two were available, one on the back of the beach north of the village and another near the hotel. I favored the beach & Lowe liked the hotel site. Upon inspection we found that the offall dump was along the beach & the smell blew decidedly into my chosen site. We were then unanimous and camp was set up near the hotel. While walking along the beach great quantities of drift shells were seen & numbers of interesting birds:

- 3 Long-billed Curlew
- 1 Black-bellied Plover
- 1 Killdeer
- 1 Snowy Plover
- many Glaucous-winged Gulls ✓
- " Yellow-legged Gulls ✓
- several Western Willets ✓
- many California Gulls ✓
- many Ring-billed Gulls. ✓

I crossed the beach and returned along the back of the sand dunes. 5 Horned Larks were seen and a single Shrike. A lone Prairie Falcon was perched on a small dune and when flushed he sported over 5 ravens that were flying by diving into their midst. An Osprey was seen flying over the small estuary that ran in from the bay. Several fish traps were plainly showing across the inlet of the estuary, probably built by Indians long ago.

I neglected to mention the troglodyte habits of part of the natives and a series of caves have been dug in a bank near the estuary. After camp was set up I spent the greater part of the afternoon getting up my notes and nursing my broken back which I hurt badly setting up camp. A lone American Egret was seen flying over the bay this afternoon.

Phil and I set our traps along the ocean front and up onto the rocky hills nearby. I saw fresh gopher work along the edge of the hill and hope to catch some interesting species later.

Many Brown Pelicans & Elegant Terns fishing off shore.

Lowe and cook made a great haul of sea life from the rocks & tide pools this afternoon.

About sundown the Osprey perched on top of a boat mast nearby watching for fish. Large-billed Sparrows are abundant about the rocky shore & the village. Gambel Sparrows came into camp for crumbs. Late this evening a lone Say Phoebe was seen perched on the chassis of an old automobile.

February 9, 1934

Our traps held an abundant catch of 20 *Dipodomys merriami* and 22 *Peromyscus* of two kinds.

My back is almost killing me today. Never in my whole life of wandering did I want to be home so badly. I only hope that I can hang on long enough for the others to get a collection. Phil gave me a good alcohol rub this noon & I got out into the sun. How good it felt on my bad back. Too sick to see much of anything today but managed to get up 19 skins.

Phil set his sack of traps this evening while I hobbled around & prepared supper. Heard coyotes yelling early in the evening. As usual Lowe & Cook got a lot of shells & sea life today. Cook brought me a small bat that he caught under a rock on a hillside.

Feb 10

Feeling a bit better this morning but Oh far from being able to get after the fine things I know are here. Shall take it easy for a few days and trust I will be able to get in a few licks before we have to leave.

Phil's traps held 15 *Dipodomys* & *Peromyscus* this morning which together with those left from yesterday - it looks like a big day of skinning!

I have failed so far to make an attempt to describe this beautiful spot. In the distant north lies the High Sierra Pinecata with Carnegie Peak looming prominently on the crest of the range, flanked on the east a very serrated range of highly eroded granite stands out abruptly from the plain. On the west of the Pinecatas lies a rather low rounded hill of black lava. This hill must border Adair Bay tho I have not been able to get high or near enough to determine this with certainty. In the immediate foreground lies a most beautiful half moon bay with its high beach of white sand that rolls away from the water's edge in great sand dunes sparsely covered with xerophilous vegetation of two or three species.

On the southern side of this half moon bay the sand gives way to lava and a tongue-like reef runs out into the deeper water making an almost landlocked harbor for the small fishing boats. Directly back of camp, that is south-east, rises a small range of broken lava hills. I climbed to the top of one of them on the first morning after our arrival and found the range to be composed entirely of loose lava rocks. There is little or no vegetation on the hills and of the few plants seen only one was recognizable, and that our old desert friend *Encelia* or Desert Gold.

The area between camp and these lava hills is sparsely brushed with a milky sapid plant with tiny round leaves, a few fruitea that are being pulled up roots and all by the natives for fuel and an abundance of cholla cactus, the white bristling kind that are so vicious. It is through this growth that our present trapping is being done.

Phil set the traps again this evening, tho I felt better I am as yet in no condition to do any hard work.

February 11, 1934

Phil's line held 1 Dipo. merriami and 9 Peromyscus this morning. Am feeling a bit better today but not too good so shall be careful.

After our skins were up Phil and I went out with our gopher traps and late in the afternoon I found 3 gophers of a variety that looked too new to me, had been taken. Royal Terns & Elegant came into the bay by thousands this afternoon and were still flying about when darkness fell.

Phil set the trap line far across the bay in the large sand dunes this evening. As I was returning from the gopher traps I found a small Dipodomys deserti colony and later set 7 Schuyler traps. We looked them over about 8:30 this evening and found 3 specimens had been taken.

Feb 12

Phil's line held a great bunch of Dipodomys merriami and 9 D. deserti. I had hoped to find a small Perognathus in this association but was disappointed in last night's run. My traps held 3 more deserti but no gophers.

Birds are not common here. A few Gambel Sparrows and many Largebills are about the only land birds. A lone Sage Thrasher is a constant visitor about camp picking up crumbs and has become very tame.

A great many pelicans fish off shore daily and occasionally Brewsters Boobies are seen. Royal Terns in pairs are to be seen commonly. A pair of Tree Swallows flew about for a couple of whirls early this morning.

Three species of gulls are abundant: Ring-billed, California and Glaucous-winged. The Yellow-legged Western Gull is not abundant but a bird or two can be seen in any gathering of gulls.

Phil set his traps on the other side of the bay again this evening. I reset a couple of gopher traps & picked up the others.

February 13, 1934

Phil got a nice run of *D. deserti* and *D. merriami* again and again neither *Peromyscus* nor *Perognathus* were present in the catch so guess they are not to be found in the sands. While picking up his traps he saw some quail - probably desert (*Gambeli*).

After lunch I made a picture of the high tide and while watching the gulls a school of large *covina* broached out amid the anchored boats. The gulls assembled to get the small fish too and I tried to get a long-range picture. The fish kept chasing up the anchovies with increased numbers and finally a school that seemed to number millions charged the tiny fish right into the cove and the people were throwing out dozens of 5 to 10 lb fish onto the bank with their bare hands. A well-trained native dog had his fun too, plunging into the maelstrom, seizing a fish and bringing it ashore. This he would nip on the head and dash out for another. This dog must have landed at least a dozen fish. This milling bunch of fish seemed to come an acre or so and were so intent on catching prey that the small anchovies were beached by thousands.

I shot up all my films (loaded) & trust that some are good.

Phil set his line up a rocky canyon in the rocky hills east of camp, hoping to get *Perognathus*. I am still feeling mighty shaky and am not over exercising.

Feb 14

Phil's traps held 1 Woodrat and 10 *Peromyscus*. The Woodrat seems to be of a variety I have never seen before and a series is quite desirable.

Saw a lot of Heerman gulls today, evidently they are following the fish. A lone Audubon Warbler was seen near the village this afternoon.

Lowe and Cook are still mighty active in the conchological field bringing in great sacks full of all sorts of sea life.

Phil set his traps again in the rocky canyons hoping to get *Perognathus*. Saw a Turkey Vulture today.

Feb 15

Phil's traps held 1 *Dipodomys m. merriami* and 8 *Peromyscus*. The lack of *Perognathus* seems peculiar to me but so far not one single specimen of this species has been taken.

Phil and I set all our gopher traps back of the sand dunes. Runners were found scattered over a large area, some of them within a few rods of the wet sea beach. I was very surprised to find *Dipodomys deserti* living in the close proximity of the high tide line.

I saw several (about 20 ) Black Turnstones and a single Ruddy was in their midst. Snowy Plovers, Least Western Sandpipers & Western Willets were in fair abundance while Large-billed Curlews & a very few Marbled Godwits were seen. Gulls were common and of 4 kinds and most abundant in the order given: California, Yellow-legged Western, Ringbilled and Glaucous-winged.

Royal Terns were flying about in pairs evidently the nesting season is close at hand. Brown Pelicans - common.

Phil looked over the gopher traps late this afternoon & several (4) gophers were taken. No mice traps out this evening.

A pair of Tree Swallows sailed over camp today but I did not get a shot at them.

February 16, 1934

Shot a few birds today: 3 Wilson Plover from a flock of 8. Phil saw a Horned Owl on the rocky hills near camp.

Gopher traps held 2 more specimens.

Feb 17

Phil and I went hunting back of the sand dunes. Saw a Marsh Hawk, a Prairie Falcon and numbers of Sage Sparrows. Had a rather unique experience today when we flushed and killed a Wilson Snipe out on the desert far from any moist region. We also killed a Le Conte's Thrasher and saw another. Sage Thrashers are fairly common. No mice traps out today and intend working birds now until a collection of the smaller land birds has been made.

Phil set several Schuyler traps for Woodrats this evening.

Feb 18

The traps held 3 *Neotoma venusta*. Phil and Lowe went dredging again today and Cook and I went up the beach. Early this morning a Sage Thrasher found his reflection in the windshield of a truck parked nearby and fought the shadow for 3/4 of an hour. This was the first instance I have ever known of this species shadow boxing.

Saw several Snowy Plovers, 3 Black-bellied Plovers, 1 Snowy Egret (this lone bird has been about for the past week), many W. Willets & Long-billed Curlew, a few Marbled Godwits.

Heard many band of geese flying over last night but was unable to determine the species.

Walked up close to two male Pintails and 1 male Red-head Ducks this morning. Each morning for several days there has been rather a large flight of ducks go by. Those I could identify were Pintails with the exception of a bunch of about a dozen Red-breasted Mergansers.

The traps were not changed today. In the afternoon a Mexican came into camp asking if one of us was a doctor. He said a young widow was very sick and wanted medical help. In the end it fell to me to prescribe to her ills so I advised a good heavy dose of Castor oil. That being the extent of my knowledge of the case.

February 19, 1934

Lowe and I walked down the beach <sup>south</sup> ~~se~~ east of camp. This locality had proven very poor for shells tho the tides being wrong now he was out to explore even poor places. I walked about 3 miles down the beach finding nothing of interest and saw only 1 very wild pair of Great Blue Herons that I was unable to get within gun range.

Cutting back inland I found birds very scarce. I found a small bunch of about 25 Lark Buntings, getting 3, and saw a dozen Western Chipping Sparrows, as many Brewer Sparrows and two or three Sage Sparrows.

I found where several antelope had passed <sup>d</sup> within a few days but not one of these critters have I yet seen.

Phil went north back of the sand hills and captured a couple of fine species. Out of a flock of 50 Mountain Plover he killed two and he also killed an involuntary Le Conte's Thrasher.

Gulls came in by thousands this afternoon and when the fishermen commenced cleaning their fish in mid-afternoon they had a fine feast. I made a dozen pictures, some of which I hope are good. 4 species were present tho about 95% of them were California either adult or 2nd year. Next in numbers were the Yellow-footed Western, the Glaucous-winged and rarest were Ringbilled.

The old Osprey still perched on top of the boat masts every evening.



Phil changed his rat traps this evening setting them amongst the rocks on the lava hills.

February 20, 1934

The traps held 1 *Neotoma lepida* and three *Peromyscus*. Phil and I went hunting north of camp. We kept back of the sand dunes in the scattered fruitea and salt bush growth. Life was very scarce and in about two miles we saw but a very few Sage Sparrows. Arriving at the spot where he had shot his Le Conte Thrasher yesterday we started searching for the nest. Presently I flushed a Thrasher from a bush and upon searching the bush found its nest containing 3 eggs. Phil shot the bird which proved to be a male and the mate to the bird he had killed yesterday. The male bird had been brooding the eggs.

Farther along we flushed a Palmer Thrasher & after a brisk walk got within shooting range. Two heavy shots failed to drop the bird though it was hit with a single shot that prevented its flying very fast. As we approached the bush in which the Thrasher had taken refuge a small bunch of Gambel Quail ran out and four were taken.

A large area of cholla cactus next drew our attention but this place proved too much and we were glad to get out of it. On the outside edge we found several *Neotoma venusta* nests and a single match thrown into the cholla clump that harbored the nest set it afire to draw out the rat. Two specimens were driven out of their nests and shot by this method.

On our return to camp another Le Conte Thrasher and 9 Horned Larks were taken. The Horned Larks were from a fairly large flock that we found on the aeration field. Several Mountain Plover were still lingering about on the field.

The day was overcast and threatening rain, towards evening a few scattered sprinkles fell though not enough to lay the dust.

The rat traps were not reset tonight. He looked the traps over at sunset & found an *Ammospermophilus* had been caught during the day. This is the first specimen of this species taken to date.

Feb 21

I had so much to do that I <sup>did</sup> ~~had~~ not leave camp at all today. Phil set out about a dozen Schuylers in the bushes near the sand dunes for Round-tailed Ground Squirrels. Phil hunted down south east of camp today getting about 5 miles from camp. He secured a Cactus Wren, 1 Shrike, a Marsh Hawk, 1 Anna ~~Hummer~~ & several Brown Sparrows. Saw a large Golden Eagle. This evening his traps held 7 Round-tailed Ground Squirrels and an *Ammospermophilus*. The small Snowy Egret still hangs around.

February 22, 1934

I had a great bunch of specimens on which to work today so did not stir from camp.

Phil went hunting and brought in several Round-tailed Ground Squirrels from his traps and a single Shrike. Cook has become quite homesick and is out to help in any way towards our early departure. He is now running some rat traps to expedite the quorum of desired number of Ground Squirrels.

Early this morning great flocks of Pintail Ducks were seen passing from north to south. The heavy bank of clouds on the western peninsula presaged a storm & it is probably raining in San Diego today. In spite of these distant clouds the day was calm, bright and beautiful. All the fishing boats were out and after dinner Lowe and I went down to the beach where 10 tons of fish were being decapitated with axes & loaded into awaiting trucks by light of the moon and two very dim oil lanterns. How I wished a scene of this sort could have prevailed during daylight hours for photographs.

Feb 23

A brisk wind sprang up during the night but abated soon at sunrise. It left in its wake a boisterous sea which broke up Lowe's plans of dredging today.

Phil looked over his traps and came in with a fine, very beautifully marked *Spilogale* that had been taken in a Schuyler trap set in the rocky hills nearby. It is the boldest marked specimen I have ever seen & might well be a new race. During the day he brought in one more Ground Squirrel. I got all the skinning caught up just before 2:30 p.m. lunch and drew an easy breath for the first time in several days.

The fresh wind of the morning continued all day long and gives promise of a real storm before it is finished.

About 4 this afternoon Phil, Cook & I gathered up all skinned bird and mammal bodies and with my trap carrier & 4 steel traps went out to set them. They were placed back of the sand dunes north of camp.

This morning I noted 3 Surf Scoters flying over the rocky beach line and while talking to Armando near the shore of the tiny bay two ducks were seen swimming close in. Their actions seemed peculiar as they seemed to rip the surface of the water much in the manner that coots do. Phil happened along at that moment with his gun & Armando asked to shoot the ducks. Which he was allowed to do. He killed one which turned out to be a female Red-head Duck. Just after sunset he came into camp and

proclaimed the presence of another bunch of ducks nearby. Phil and he went after them. Two shots killed another female Red-head. After sunset this evening the sky was overcast and the wind blew furiously. I fear rain and just my luck, too, with my best camera out!

On our way home this afternoon Phil shot the large Meadow-lark that had been staying about the small salt marsh for the last two days.

February 24, 1934

After dark last night a light wind developed into a hurricane and we had to let down our awnings to save them. This morning the sea was pounding on the rocky shore & the wind was still raging. Sand was in everything. However, after sunrise the wind abated and by noon the day was calm and beautiful with the horizon skirted with fluffy clouds.

Phil and I looked <sup>at</sup> our coyote traps & found them untouched. I skirted the cleared spot called an aeration field and found a fairly good sized bunch of Horned Larks. Several shots secured but one bird. I also saw 19 Mountain Plover but did not try to kill any of them. Along the shore I saw a bunch of 12 ducks & picked out a fine male Red-head from their midst. I also saw a Hudsonian Curlew today and many Heerman Gulls. At noon a small run of fish brought a great concentration of gulls - Heermans, Glaucous-winged, Yellow-legged Western, Calif. and Rough-billed and 3 Bonaparte were seen. Also I saw several Tree Swallows.

Rebaited the coyote traps this evening & the weather looks as though it might rain. The wind again sprang up but not as strong as last night.

Feb 25

The day was blustering all during the morning but about noon turned out clear and beautiful.

I had several skins from yesterday so did not go on a long hunt. The coyote traps were untouched & I now hold but little hope of catching a specimen because one man here has taken 24 during the past 6 weeks & those left are mighty wild.

Armando shot two Scaup Ducks this morning. Phil & I shot a couple Meadow Larks & a few Horned Larks on our way back from the coyote traps.

I saw a pair of American Eared Grebes swimming near shore also a few Tree Swallows flew past.

The fishermen had a great day today & there must have been at least 10 tons of fish brought in this evening.

Just as the sun was setting in a burst of golden glory an airplane flew over giving a touch of modern civilization that we had not had for the last 3 weeks.

February 26, 1934

Phil and I went over to the coyote traps after breakfast. They were still untouched. After a turn around the aeration field for Horned Larks where 3 specimens were taken, we went into the rocky hills. He showed me the Horned Owl's nest that he had found several days ago. The single egg remained and no doubt deserted! The nest was composed entirely of regurgitated pellets that had decomposed into a felty mass and was situated in a niche like crevice amongst large lava blocks. It seemed rather strange to find Horned owls nesting under such conditions, though there were no other available places here about. My experience with Horned Owl's nests has either been in rather high trees or perpendicular cliffs.

There were several large outcroppings of huge lava blocks situated on this group of hills and in each outcropping was one large rock that was in a rather prominent position. This rock was always well whitewashed with excrement and marked the hunting perch for owls. Pellets were to be found about each of these perches and indicating that this range of hills has long been the home of Horned Owls.

Upon investigating the most rugged outcropping, the pair of owls were flushed but too far for a killing shot though we both emptied our guns after the flying birds. I gathered up a couple of dozen pellets from this roost and in some found, besides the usual and expected rodent remains, numerous parts of huge scorpions. This I believe is a very unusual diet for Horned Owls. Numerous fecal deposits of small carnivores were seen through these rock slides, probably Spotted Skunks.

We followed one owl far out onto the desert but were unable to get sufficiently close for a killing shot.

Phil set all the Schuylers in the rock slides this evening in hopes of catching another Spotted Skunk.

Feb 27

I went over to photograph a cactus and Horned Owl's nest this morning and saw a single Mocking Bird near the salt marsh.

Another thing I have noticed that seems of unusual interest is the number of deserted Verdin's nests without occupants. One morning's walk in the fruitea I counted 9 nests in a fair state of repair yet in the three weeks of almost daily hunting not a single bird has been taken. I am certain that they could not have been overlooked as numerous Gnatcatchers have been seen and several collected. These two are usually associated so would not have missed the Verdins.

Two new birds were added to the collection today - a Rock Wren and a Tree Swallow. However, both had been previously recorded.

A very low tide attracted us to the beach later this afternoon. A very brisk wind sprang up at sunset threatening the tents and blowing sand into everything.

February 28, 1934

The north-west wind blowing a gale this morning as several fish trucks came in during the night. A few of the more venturesome fishermen put out at daybreak but by 9 o'clock had all returned - too much wind!

Phil went hunting but had only 2 shots, both at a flock of Horned Larks. 9 specimens were taken.

The rat traps in the rocks were empty and were all brought in. The wind was so violent that little or no activity prevailed. Lowe stayed in camp all day. I put up all the skins & packed up during the afternoon as we are planning to leave early in the morning.

The wind abated about 4:30 this afternoon and we all began debating whether or not we would start out after supper as a great full moon would rise at sunset.

Soon all were convinced that a night ride over the sandy region was better than the warm day so packing started in earnest. Tents down & the canvas loaded by 8 p.m. and 8.01 found wheels turning towards home.

Our trip across the sandy region was uneventful. Cook caught a sidewinder rattlesnake and was our only stop.

Camped for the night about 25 miles south of Sonoita amid a beautiful growth of desert cacti and other shrubs.

February 11 - February <sup>18</sup>~~17~~, 1935

Kino Bay, Sonora, Mexico

Huey with Lowe, Bloomfield and Lichteys

(beginning and end of trip not recorded)

February 11, 1935

With fleecy clouds all about this morning we packed up and left Porto Libertad bound for Kino Bay. Our straight road led directly east up a long very gently rising slope. 15 miles away at the first curve we reached the edge of the plateau and a glorious view spread out behind us towards the Gulf. We stopped and made a few pictures. This long rising slope had increased in vegetated density from the growth near the beach which was more nearly representative of the Colorado Desert to almost a tropical jungle on the plateau which I judged to be about 1M ft elevation. There were several new cacti & copals that I had never seen before. It was quite evident that this high plateau represented a more southerly associational area.

Our road had a rather irregular course to Datil where we hoped to take a short cut to the main N & S highway, but some Americans that had just arrived from Altar told us that the rains of the past week had softened the road & it was impassable. So there was nothing for us to do but turn north to Pitiquito and Altar.

Many Antelope jack rabbits were seen before & after we left Datil and three species of woodpeckers were often seen as we sped along a fairly good grade (Gila - Yellow-shafted flickers and cactus).

Fluffy clouds decked the sky everywhere - beautiful to see but with the promise of a miserable overnight camp if we slept out of doors.

About midway between Datil and Pitiquito the flora changed into the Tucson area and a study of the life would no doubt verify the statement.

At Pitiquito we stopped to inquire for a Mr.        and I had a chance to make some pictures of a rather pretty clean Mexican ranch.

Reaching Altar we gassed up and just as we were ready to leave an old forest ranger friend came up. I had met him in Tucson 3 years ago. He had just arrived from the north & said 3½ inches of rain had fallen in the past week at Tucson so little wonder our ungraded cutoff was bad. We drove eastward over a gently sloping region covered with creosote & huge mesquites. Very definitely of the Tucson association. Many Antelope jack rabbits were seen and very few birds. The only ones were Mearns flickers as their yellow wings flashed in the evening light.

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Santa Aruna was reached well after dark and as the weather looked bad we found a room at the hotel where for 1 peso we spread our cots & spent a comfortable night indoors!

February 12, 1935

Lowe's alarm clock roused our slumber at 6:15 and we packed as fast as possible with a cup of coffee at a "hole in the wall" Cafe where they served on one small table barely large enough for 4 and lighted by a single doorway. We soon were on our way south - Hermosillo bound. The main highway south from Santa Aruna was a beautiful graded hard surfaced roadway closely rivaling some of our fine Calif. boulevards and the old truck appreciated a bit of easy rolling as we stepped her up to 45.

The hills were all well clothed in shrubbery - mostly Palo Verde with ocotillos and iron wood sprinkled in and giant cacti in patches as soil conditions permitted. I hesitate to imagine what glorious color prevails when good season of rainfall occurs for the yellow Palo Verde blossoms sprinkled with the red tufts of ocotillo would offer a bazaar of color.

Birds were not common or we were going too fast to see them. Occasional rock clad hills near the road brought expectant and hopeful remarks from the conchologist who prophesied the certain presence of land snails near their summits. 60 Miles of fine road came to the beginning of a 40 mile detour and the gangs of workmen busy on the highway. We were told later that over 700 men were working on this particular stretch. All soldiers from the regular army - tractors & scrapers with modern attachments were being used. Along this stretch we were running much slower & more wild-life was seen. 4 coyotes in one bunch ran across the road right in front of the truck and stopped a short distance off to watch us pass. Black vultures & caracares were not uncommon near the camps of the workmen and several pairs of W. red-tailed hawks soared overhead.

Some fine collecting canyons were passed. The side hills clothed with heavy scrub and the streambeds-all dry - were bordered with a heavy growth of ironwoods and large mesquites. Occasional organ pipe & giant cacti were seen with flickers, Gila woodpeckers & Cactus wrens present. As of yesterday fleecy clouds filled the sky and occasional streaks of precipitation could be seen over the distant hills.

Our course followed south over the western hills of a great wide valley to eastward a large range of high mts. were visible, probably an ornithologists paradise.

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We stopped for lunch at a small rocky hill near the road side 6 miles from Hermosillo. Lowe found some land snails under the rocks and I made several pictures of the cloud-enveloped landscape. We arrived in Hermosillo about 1 p.m. A beautiful town of several thousand population. The first thing we saw was a modern school with hundreds of children swinging and sliding down slides, playing basket ball and yelling - exactly as modern as our city schools. Tho the noon hour must be longer and now instead of the old time custom of mid day siesta the kids have a boisterous game of ball with much vocal expression.

Two Missions lifted their spires high above the village roof tops and paved streets greeted the truck wheels. Time forbade our exploring the city tho it looked intriguing and we hope to spend a few hours on our return.

We gassed, got a few loaves of bread, I wrote a short note home and 2 o'clock found us again on our way - westward towards the Gulf and Kino Bay.

The western sky had now settled into a pall of black clouds, the sun was totally hidden and a brisk wind felt damp to the face. The road too was different and instead of a straight graded one was now a meandering pair of wheel tracks that led here & there as brush permitted, full of holes from the pounding of the heavily laden fish trucks. 72 miles to Kino Bay - and the promise of rain and mud!

Ten miles out the peal of thunder heralded the storm - we were in its western edge but plenty of rain fell. The road was soon a flood of water and a sea of mud. Slip & slide in low and second we slowly crept along. Our country was flat & level with the permanent growth - ironwood and creosote.

Several 6-horse teams with the wagons piled high with fire wood were passed. Some of the teamsters rode the wheel horse but most were walking, dripping wet but smiling happily - a typical Mexican custom - smile at adversity.

A couple of rocky hills near the road got Lowe excited over snail prospects - but no chance today to take time out for exploration. Amid showers we saw several Antelope jack rabbits near the road which now was like two small streams instead of tracks. Every chuckhole as the wheel hit it sent a great sheet of dirty water over the car. We passed 2 heavily laden fish trucks that had had considerable trouble. Their account of the roads ahead of us was only balanced by one account of those ahead of them. We were all scared of our prospects. About 1 hour before sunset we ran out of the cloud bank into sunlight and at a cluster of rickety adobe and stick huts called Costa Rica where lived a couple of families of Mexicans with 12 or 15 raggedy kids of all ages.

We asked our way. We were informed that Kino was about 20 mi westward and it took three hours to make it. This was amply verified in the three hours it took to drive it. Bumpy - rutted - and crooked - 10 mi per hour was top speed & more after 5.

Creosote brush and iron wood prevailed with occasional giant cactus & mesquite. The rain here had been just enough to settle the dust and but little imagination was necessary to visualize what the traveler would encounter on dry days. The soil was that powdery fine silt so common in desert regions. I saw one round-tailed ground squirrel and occasional mounds with large holes proclaimed the presence of either desert kangaroo rats or their Eastern relative Banner-tailed ones. I hope to find them at Kino.

Darkness overtook 10 miles from Kino. As we reached the vicinity of the beach a heavier precipitation was in evidence and several very ominous sink holes in the road were successfully crossed.

Reaching the fishing village Lowe inquired the way to the hotel that on his visit 3 years ago was being run by an American named Holmes. We were directed over a road that soon found to be blocked by water and our foolish turn from the tracks on my part resulted in the truck being mired 100 yds from our destination. A fair moon gave light enough to take in the situation and it was decided to eat a couple of cans of beans, pack our beds up to the old hotel and dig out the truck by day light. We found the American had died a year ago and a Mexican couple had two pool tables in the old place and called it a lodge.

A score of fishermen were busily playing pool with boisterous laughter and much guffaw while a lone woman peddled coffee and tortillas. Kept warm by a 5 gallon oil can which had an end cut out holding the smoky fire. The smoke filled room offered little repose to me but Lowe and the boys spread out their cots in the corner and tried to sleep. I set mine up out on the porch & thanked the makers of a good sleeping bag for a perfectly comfortable night's rest.

February 13, 1935

Morning broke with a few clouds in the eastern sky & a mired truck. A cup of coffee & a tortilla each were served us by the landlady. These had been dubbed "Tar pollians" by a white lad in Tucson & were the first either Phil or Norris had ever had. The one I had digested - much to my surprise

but Wrightley's chewing gum seemed much more chewable and decidedly more savory.

The truck proved less of a problem than we had anticipated and half an hour found us high & dry looking for a place to camp. The prospects were gloomy for a good camp until we located an old campsite amid scattered mangroves, 200 yds south of the old hotel.

Kino Bay proved to be another of those semicircular indentations along the Gulf shore bounded on the north & south by rocky ranges and hills or mountains that have withstood the coastal erosions. This place differed from the others I have visited in the presence of a small inlet about 1 mile offshore. To the northwest the ragged outline of Tiburon Island filled the horizon. I should judge it to be about 12 miles away. A half mile north from our camp was situated the fishermen's village - a nondescript bunch of huts made of everything from adobe smeared ocotillo thatched walls to brush shacks or tin can hovels.

Beyond that another quarter of a mile was situated the Seri Indian huts - a motly mess of closely bunched brush wickiups. Rags - dogs - frazzled-haired dirty kids and all in all a stinking mass of humanity.

The place offered little in prospect for the bird & mammal standpoint. A small forest of giant cactus half a mile east and a rolling wind-blown terrain about held nothing to excite me greatly. The great flock of mixed gulls found near the fishing villages along the Gulf were present. Their numbers, however, were augmented by a dozen or more waddling black vultures that fought and tugged with the gulls for their share of the offal.

After camp was established Lowe and Misha went down the beach to the estuary  $1\frac{1}{2}$  miles south. ~~Amak from the mangroves made~~  
A sack of large oysters from the roots of the mangroves made a most delectable meal.

Phil & I looked the place over, shot a couple of birds & went down to the beach for an hour. In the evening Phil set a line of traps. As I was cooking supper a Seri Indian came into camp with a calf skin to sell. Failing in this he begged for old bread. We discouraged this as we were told they would be pests if we gave them even a tin can.

February 14, 1935

The traps held a few *Dipodomys merriami*. Phil hunted this morning and found but few birds. Lowe took in the beach. Traps again were set just east of camp and a lone woodrat's nest nearby was trapped. A pair of ravens were seen nearby today.

In the afternoon Phil and I walked up the beach and a couple of Americans named Addis &           hailed us. They were old San Diegans & Addis was well acquainted with Miss Busse's sister.

February 15, 1935

The two lines of traps held eleven *Dipodomys* while the woodrat trap its woodrat.

A brisk breeze from the north came up last night and rose during the day to a raging dust storm that threatened to level the camp and kept the fishing fleet on the beach. At sundown the wind was still blowing violently so no traps were set.

February 16

Weather still bad - packed up box of dried skins & now have the chest empty for fresh start.

After lunch I accompanied Lowe to the estuary about 1 mile south east of camp.

Mangroves lined huge tidal flats that were bare of water at this hour. Birds were abundant - American egrets, Louisiana herons, Long-billed curlew, Western Sandpipers, Semi-palmated plovers, 1 Duck hawk, 1 Marsh hawk, 3 G.B. herons (ssp ?), 6 white ibis, several Yellow-crowned night herons. Flock of 25 Scaup ducks, 40 Red B. mergansers, 1 Farallon cormorant, Belding plovers, 1 osprey.

On the long sandy peninsula that extended about 2 miles south of camp and separated the estuary from the sea several land birds were seen amid the heavy growth that covered it. There were 4 Audubon warblers, 2 small bunches of Gambel sparrows, 1 Gila woodpecker, several Violet-green swallows and 1 Say phoebe. I shot 1 Gambel sparrow, 1 Ash-throated flycatcher and 1 Antelope ground squirrel. The latter was perched on the uppermost tip of a Cholla cactus looking at me. On my way back to camp along the beach I shot a fine pair of Frazier oystercatchers.

Misha set a line of mouse traps in the Giant cactus about 1 mile north of camp.

February 17, 1935

Dawn broke calm and beautiful after a very cool night. The traps held 4 *Dipodomys m.* & 1 *Peromyscus e.*

Phil who had been sick for the past 2 days felt well enough to go hunting and set out for the Giant cactus. He shot a nice bunch of birds.

In the late afternoon I went up the beach for a walk & at sunset set 2 traps for *Dipodomys deserti* in the sand dunes near the beach. Set a pair of coyote traps east of camp.

February 18

My Dipo traps held a fine female *deserti* - very gray and I suspect it to be *goldmanni*.

Misha's traps held a great lot of *Dipodomys m.* while Phil caught a woodrat.

In late afternoon Lowe and I went up to the village beach where we photoed great bunches of fish and Seri Indians. The Indians seemed very sullen when their picture were made.

Gila Bend, Arizona

January 31 - February 9, 1936

Huey with Sam Harter, Norris (Misha) Bloomfield and

Phil Lichte

January 31, 1936

Left San Diego at 7 a.m. in the Museum truck with Sam Harter, Phil Lichtey and Misha Bloomfield bound for the region about Gila Bend and Ajo in south central Arizona.

The trip was without incident until we reached the vicinity of Winterhaven on the Colorado River where a very black Ferruginous rough-legged hawk was seen and an hour was spent in unsuccessful pursuit.

The State inspectors were passed without delay and we arrived in Gila Bend about sundown. Had dinner with old friend Jake Miller.

Turning south towards Ajo we made camp for the night 10 miles south of Gila Bend where we each set out our sack of traps.

About 200 traps were set over the malapi, creosote studded plain.

February 1, 1936

Our traps held 2 Perognathus and 4 Dipodomys.

After breakfast Misha & Phil went out collecting insects and reptiles while Sam & I went hunting. Several lava hills lay east of camp and we journeyed towards them with the object of searching for good trapping ground. Several small giant cacti were found growing on the hillside while each water corner was marked with large ironwood and Palo Verde trees. The railroad that runs to Ajo passes near by and from the map Black Gap is but two miles farther south.

Ascending the largest of the rocky hills the creosote plain was beautiful in the morning light which was softened by a thin layer of very high clouds.

Cactus wrens, Le Conte thrashers and mocking birds could be heard in the distance as there was no breeze and serene calm prevailed. I shot a sage thrasher and saw a pair of rock wrens on the hillside.

While watching for birds the train passed going to Gila Bend and a Woodhouse jay alighted in a Palo Verde some 75 yards below me. I shot at it but unfortunately missed. Along the wash when returning to camp several fresh gopher holes were found. Birds were fairly abundant. Sam collected 6 or 8 specimens.

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Between sparrows, gnatcatchers, Phainopeplas, Desert sparrows, Gila woodpeckers, 1 Mearns flicker, Gambel sparrows were a few of the birds noted.

Returning to camp Sam & I got out the gopher traps and went back to set them. Enroute I shot a Green-tailed towhee. Five sets were made for gophers. A great deal of what looked like *Dipodomys deserti* workings were found.

In the evening the boys set their traps over the small lava range of hills east of camp.

My gopher traps held a single specimen and I set five Schuylers near the mouth of some large burrows.

February 2, 1936

We had had so much trouble making our skins in the wind yesterday that I decided to pitch the tent. This move was later to prove very fortunate.

The traps held several *Perognathus intermedius*, 2 *Peromyscus eremicus*, 2 *Neotoma albigula* and 1 *Neotoma lepida*. This latter specimen looked very interesting and may prove to be unnamed. My gopher traps were empty as were my Schuylers.

After breakfast Sam & I went hunting west of camp. We followed the dry water course from near camp to the range of hills that lie about 2 miles to the westward. A brisk south wind was blowing and it was impossible to hear bird notes above its roar. Birds were not common. A Prairie falcon flew out of a Palo Verde and I shot at it but the hawk was too far away. Farther down the wash we found a pair of Crissal thrashers & got one of them.

Returning to camp by a circuitous route we shot 1 Gila & 1 Cactus woodpecker and saw a large bunch of Gambel quail.

The violent wind increased as the afternoon waned and the overcast sky darkened.

My gopher traps were empty this evening and I have given up hopes of catching more in that colony. I set 5 Schuylers for *deserti*.

The boys set their mouse traps over the rocky hill again.

As we were eating our supper the Deputy Sheriff from Gila Bend came into camp. He was looking for a wrecked automobile but was curious to find out what we were doing. He seemed well satisfied when shown my Arizona permit in spite of its being 1 year too old. Shortly after dark the storm broke and



and we made a wild scramble in the dark, getting our beds into the tent. Rain fell heavily for about an hour flooding the whole country. We had not staked the tent too well and at the first lull in the downpour Musha and I put in all the rest of the pegs.

February 3, 1936

As we had expected, the mouse traps had all been sprung by the rain last night but a few of the rat traps that were protected in caves held three woodrats, two of which were the small, black-tailed lepida group that are very promising.

My five Schuyler<sup>s</sup> that I had set in the Dipodomys deserti colony held two. They showed signs of being wet and without doubt had been caught before the rain started at 7:30 p.m.

Sam & I went hunting up the wash east of camp but got nothing of note. I dropped a Cooper hawk with a broken wing but it escaped on foot in a tangle of mesquite. Saw about a dozen Mountain bluebirds. My gopher traps were untouched so I picked them up. I do hope I can find a place where a good series can be trapped as the one I have looks much different from those I have seen from farther east and are certainly not like the Colorado River specimens.

The boys went out for insects during the sunny part of the day. This day having been bright clear and almost windless for a change.

Traps were set over the rocky hills again tonight. About sundown the temperature took a downward drop and while the day was clear the air was very cold and we were all chattering our teeth when we went to bed.

Last night a kit fox took our garbage can from beside the tent so I set my flash camera.

Feb 4

During the night the fox again took the bait can from beside the tent and also fired the flash trap. Sam was the only person in camp to hear it go.

Our traps were again empty this morning. Sam's line held 2 Peromyscus eremicus, Musha caught 1 Dipodomys deserti and my Schuylers held 2 Citellus tereticaudus. The boys had located a couple of fresh gopher holes and after breakfast we went out to set traps in them. In all we set 8 traps and my hopes rose as it looks as though I would get a series.

We then set 15 Schuylers baited with prunes and grapefruit rind through the rocky ridges of the lava hills.

Sam drove to Gila Bend for fresh bread and a supply of water for we are stopping in a waterless camp.

In mid -afternoon I went over the gopher traps but alas not a single specimen. These are certainly the most difficult gophers to trap I have ever experienced. Usually gophers in the wild state far from the realms of cultivation fall easy victims to trapping.

After lunch the boys took their nets and sacks of traps and walked to the western range of hills. These lines will be harder to work as the hills are about 2 miles from camp. Sam set his over the creosote flat south east of camp. In late afternoon I looked at my gopher traps again but found them empty as usual. On the way back to camp I shot a Vesper sparrow near the railroad track and when Sam skinned it he found a small fresh water land shell in its back feathers. This was saved for later identification. The bird no. is 17144.

~~We went out to set traps in the~~

Saw a pair of ravens near camp today.

The flash trap was fired at 8:15 this evening, off to an early start. I had not been in bed long so hauled out and reset the camera. I was just taking off my shoes when again it was fired so out I went to change the film and renew<sup>d</sup> the cartridge. As I went down to the camera which was not a 100 ft. from the tent my flashlight caught the gleam of the eyes of a kit fox at the bait. I hurried and it ran a few yards away, hiding behind a bush where it sat on its haunches like a cute little pet dog. I approached within 15 feet when it ran out and started for the bait. I had to throw a rock at it before it would leave. Indeed it was a most cute little beast and when it ran its movements were as nimble as a sandpiper on the beach.

After renewing the film and flash powder and while still up putting the slide away in the camera box the flash was again fired, so I renewed it. This was again repeated just as I entered the tent so out again I went. The night was terribly cold and I was thoroughly chilled so resolved not to again change the film and I was hardly in bed again before the flash was again fired. That made 5 shots in 1 hour & 5 min.

Later that night the fox came up to the side of the tent and carried away a 2½ size fruit tin in which we had our bird bodies.

I was so chilled with the photography last evening that I slept cold and miserable all the rest of the night.

February 5, 1936

Sam's line held 1 *Dipodomys merriami* and the boys but little better. While my gopher traps were empty small mammal trapping is not the best here but the indications of such things as these dark woodrats and the peculiar gophers keep us hoped up. After breakfast Sam & I circled the eastern range of hills & explored the large wash that lies a mile northeast of camp.

We found birds of certain species fairly abundant - Brewer, Gambel and Desert sparrows were in flocks while Phainopeplas were found whenever a mistletoe clump held a good crop of berries. A large bunch of Gambel quail flushed from a wide part of the wash where the desert growth formed a suitable tangle for their protection. At this point I saw a wild cat as it ran through a small opening. A Prairie falcon was seen in the air, all no doubt preying on the covey of quail. Green-tailed towhees were fairly common and at least six were seen in the 2 miles of wash that we hunted. One in particular was of interest. I frightened it from a bush and it alighted about 30 ft away from me on a small log that had been lodged by the runoff of flood water against a verdant fruited bush. Upon the moment of alighting the towhee spied a cluster of perhaps a dozen bright red fruitea berries a few inches above its head and immediately all memory of fright was forgotten as it ate voraciously of the discovered delicacy. The bird was in plain sight of me and it most certainly must have been aware of my presence. Sam saw a roadrunner and I later heard one giving its prrrr-prrrr-prrrr - a rather monotonous song.

On our way to camp I found the bait can that had been carried away by the kit fox last night. It was 10 telephone poles distance or roughly about 3/4 of a mile from our camp. Surely quite a large sized mouthful for so small an animal to carry such a distance!

The boys rebaited their traps on the western hills and Musha rebaited the woodrat traps on the eastern hills. Sam set his mouse traps on the eastern hills and while so doing found a tiny sidewinder rattlesnake curled up amongst the desert pavement on the slope. The evening was so cool that we figured the reptile would not move during the night so postponed collecting it until the morrow.

The flash trap was shot twice before we went to bed and once later during the night. I set a steel trap near the tent door for the kit fox. I didn't take much care with the set figuring that the animal would walk into anything. This later proved erroneous.

February 6, 1936

After breakfast I packed a camera over to photo the snake. It was still exactly where Sam had found it and after the picture we propped it into a jar of alcohol. The traps again held a very light catch and my gopher traps were empty. This in spite of the fact that I had taken a shovel and cut down into the deep cross runway that connects the mounds and is part of the tunnel system that the gophers use constantly.

I am at a loss to account for this as I've always been able to catch even the wildest orchard gophers when using this method.

I changed my flash camera this evening & placed it in the wash. I also set the kit fox trap with some care this evening. Twice the camera was sprung before we went to bed. About 11 p.m. I heard a rattle of chain and peering out I found the kit fox fast in the trap so got out & killed him.

The flash camera fired about 3 a.m. This time some other animal was doing it and not the persistent kit fox.

Feb 7

The boys' traps held a very light catch. We are running about 150 traps and catch from 4 to 6 specimens, surely a very poor percent, but I feel the woodrats are worth the effort.

I stayed in camp to skin the kit fox. Sam hunted west of camp and had the good fortune to collect a Canyon towhee & saw one other. As Phil was returning to camp he flushed 6 Meadow larks and saw some Western bluebirds. They brought in their traps from the western range of hills & reset them on the lava hills east of camp as this seems to be the best locality.

About 10:30 Phil and I walked a mile or so north of camp in hopes of seeing the larks but no luck. I did find four plants of night blooming cereus cactus.

The flash trap went off just after midnight with a terrific explosion - must have been victor power. Examination of the tracks this a.m. (8th) showed evidence of the presence of a coyote but only development of the film will prove what the object was. Anyway if it was a coyote that bang sent him on his way - pronto.

Feb 8

This seems like woodrat day for the traps held 5 of them and a single Perognathus. After breakfast Sam went hunting

west and I went east of camp. I found a small bunch of Western bluebirds and got 2, and a Myrtle warbler. There were about 6 or 8 Western, 4 or 5 Mountain bluebirds and a half dozen Audubon warblers in the flock. It seems odd that Audubon and bluebirds bunch up during wintertime. I often ponder over this association which seems to have no answer.

I saw another House wren and heard Cactus wrens singing. There are two or three species inhabiting nests built in a few plants of Biglows cactus that is growing about the lower slopes of this lava hill.

The pair of Red-tailed hawks that have a nest in a saguaro were seen sailing high in the air this morning.

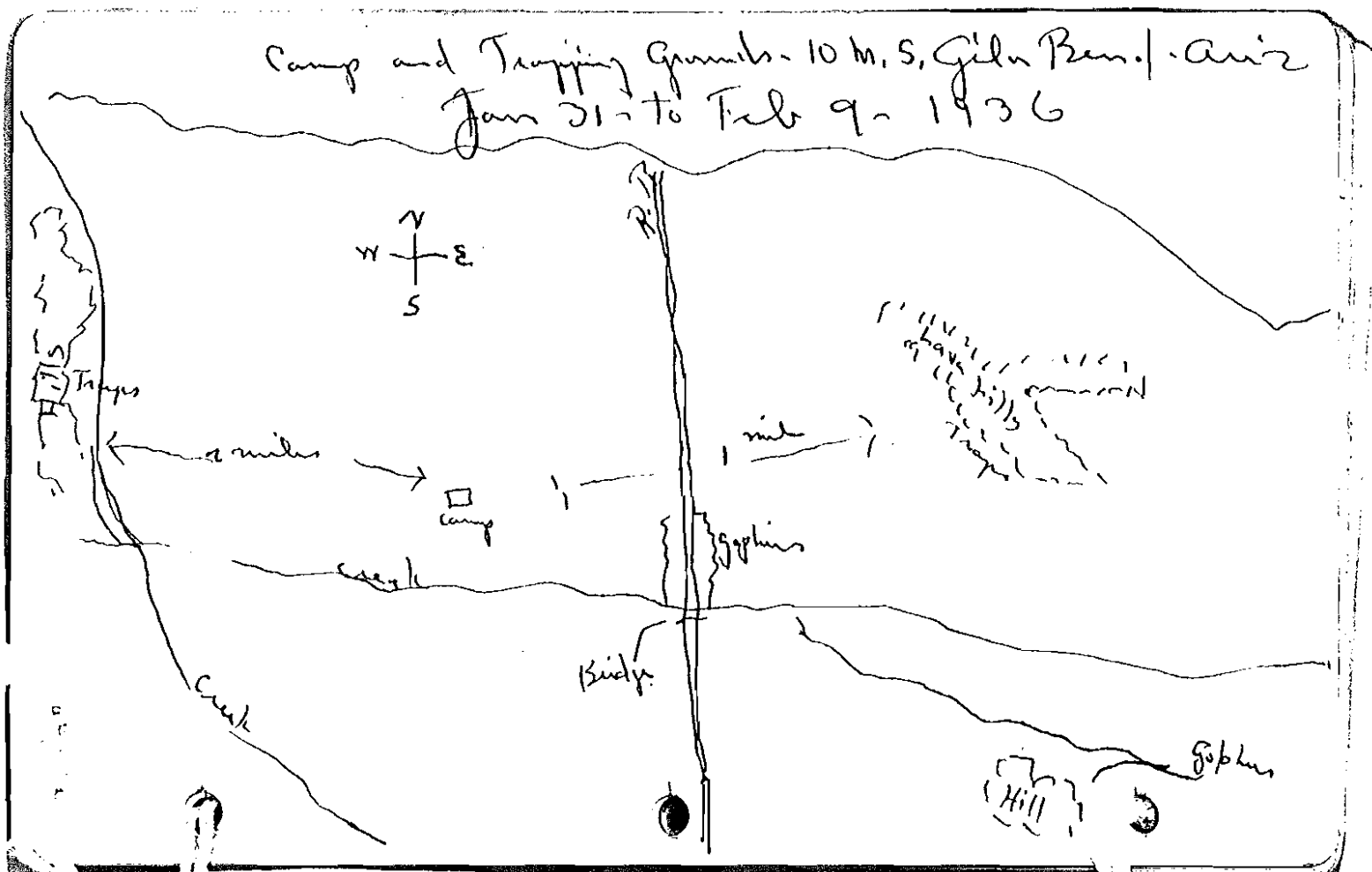
All traps are in for tomorrow we leave for San Diego and the hum-drum of city life again.

February 9, 1936

All out at 4 a.m. and each packed his bed & belongings while I got breakfast. Had a hard time getting the truck started as the bendix stuck ; finally made off at 6:10.

Saw three Ferrugious rough-legged hawks perched on fence posts that bordered a huge alfalfa patch south-west of Gila Bend.

Arrived in San Diego at 3:30 p.m.



March 11 - 26, 1936

El Valle de la Trinidad, Baja California  
Mexico

Huey with Phillip Lichty and Charles Harbison

In company of Phillip Lichty and Charley Harbison I left San Diego about 8 a.m. bound for El Valle de la Trinidad in Lower California where we hope to spend the rest of March collecting.

Our papers from the Mexican Consul's office in San Diego carried us across the border with but little delay. We stopped for lunch on the top of the hill south of Guadalupe Canyon where the two boys began gathering "bugs".

Ensenada was reached without further events. On the east side of the town an outpost customs guard looked over our papers and we turned our car uphill towards our inland goal. The good road was all behind us and the route was now beset with ditches and ruts from the wash and traffic of the rains of a few weeks past.

As we got into the chaparral belt both boys began getting excited about a day flying moth they hoped to find and they sat on the front fenders for some miles racing ahead of the machine when a moth was sighted. Several were caught but all proved to be a more common species that is not unlike the rare one. As we reached the bottom of the steep grade which dropped into Las Cruces creek we were almost hit by a wild Mexican driving an old Buick.

Reaching San Rafael valley we were soon at Ojos Negros and nearby we hailed a passing machine. Three men and a pack of lion dogs that had been in Sierra Juarez hunting greeted us. One of them being Mr. Moore of Nelson-Moore Clothing Co. of San Diego. After chatting a few minutes we drove on and made camp about three miles east of Ojos Negros.

Inspection of the vicinity revealed a large *Dipodomys* population to be present. The chief vegetation of the region was a species of broom. We all set our traps.

March 12, 1936

Our catch last night totaled 41 five-toed *Dipodomys*, 8 *Peromyscus maniculatus* and 2 *Onychomys*, a total of 51 specimens from 136 traps, a surprising percent.

We got under way about 8 a.m. Crossing the valley we came to my old collecting ground at Sangre de Cristo. Everything looked just as it did 10 years ago. As we reached the springy region on the south-western base of Sierra Juarez the boys saw some fine butterflies and I stopped an hour or so to give them a chance to collect - which they did with great vigor. This was on the San Salvador Ranch and is about 6 miles north of Alamo. We drove into Alamo for directions and were soon on our way to El Valle de la Trinidad.

We reached the valle about 3 p.m. and established camp in a stockade built of telephone poles in the mouth of the canyon about 100 yards north of Aguajito Spring.

Two lines of mouse traps were set down through the cat claw association south of the spring. Mammal sign was very abundant.

March 13, 1936

This morning our total catch for the 100 traps was one *Perognathus l.*, 21 *Dipodomys* (5-toed), 14 *Dipo. merriami* and 17 *Peromyscus maniculatus*. 53 mammals in 100 traps, an almost all time record for numbers.

With the already accumualted number from Ojos Negros I am simply snowed under with work.

About 10 o'clock a halloo outside announced the presence of a visitor and at my request in walked Mr. Raglin whom I had met when in the valley 10 years ago. He had been riding down through the mesquite when he noticed a trap marker on a bush and upon seeing the trap he remarked "that the rat catchers were back". As usual he was the jovial cowboy and was very happy to spend a few hours chatting with us. He gave me a good deal of information about the valley and gave us a lot of place names of the region.

We left the mouse traps in this until March 20 building up a fine series of the four species of mammals caught the first night.

March 20

The mouse traps were set in a new locality this evening - on the rocky hillside around the cactus above camp.

March 21

This morning the traps held 20 *Perognathus fallax* and 14 *Peromyscus eremicus*. A sufficient number of each and we planned to take in the line. Phillip caught 2 very black gophers near camp.

Mr. Raglin has been bringing us half a gallon of milk every day or so and it has been a very welcome addition to our lunch. The sky became overcast this afternoon and commenced raining early in the morning.



2-4

Juniper  
Jujube  
Juniper again  
mesquite  
Bread cedar  
cat clod  
alfalfa  
sand alfalfa  
cactus  
aguajitospry  
Juniper  
Sierra La Posa  
Red shrike

N ————— S

Prozentrinale Sichten auf Valle de la Trinchera

Disability  
~~Board~~  
 Verdict  
 Sum  
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Palo Verde  
Sum  
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Blackfoot  
Canyon

Creosote Bush.

cori20  
camp on  
Thrift  
willow

{ Present Semester ends exactly

# aguajito spring

Handwritten: *Handwritten chemical*

(Barrel Cactus  
each)

Juniper  
Sax.

Catchment  
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marguerite

Escuduto  
Spring

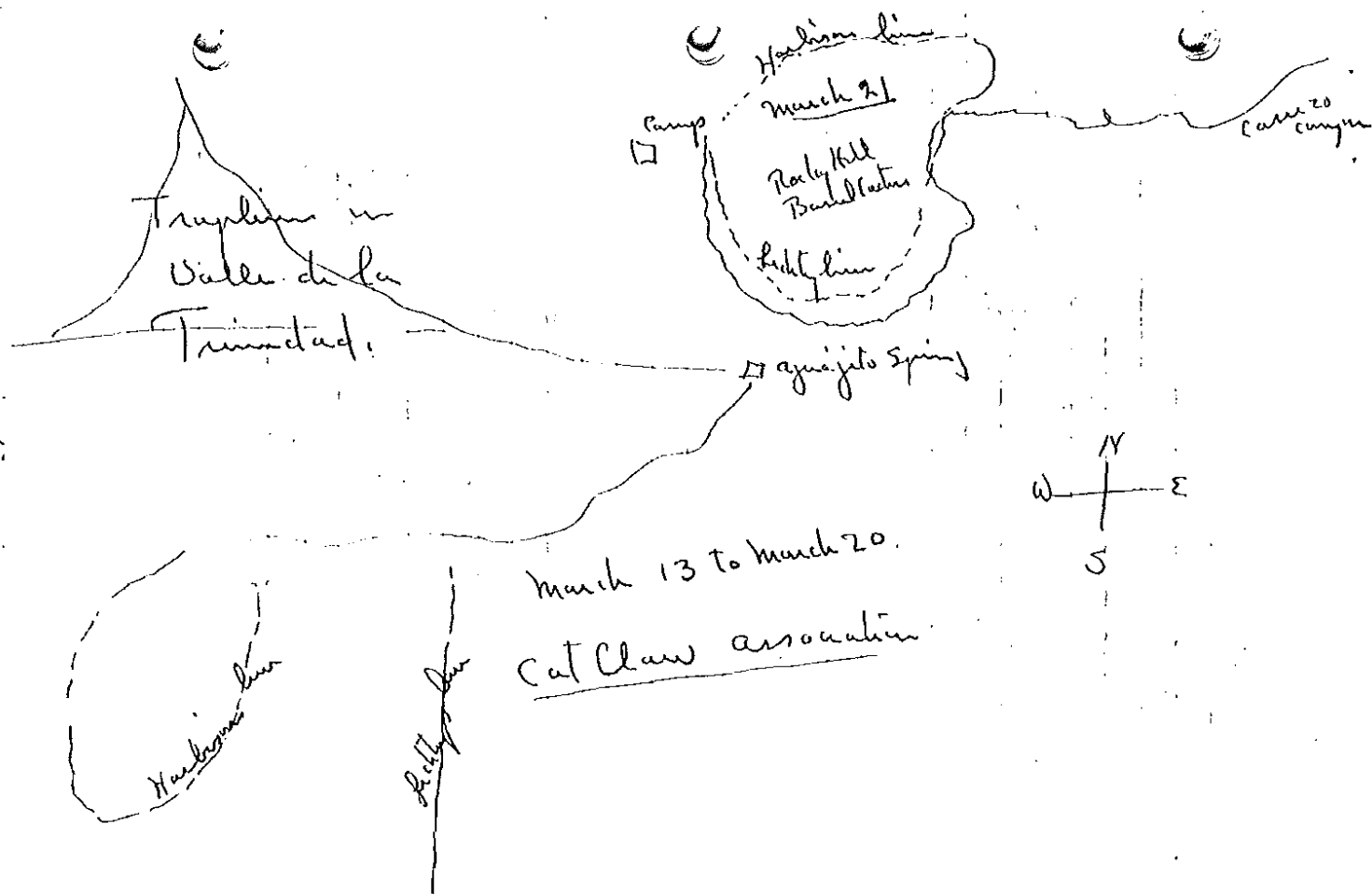
{ Mosquito  
spring  
Basil cactus  
cush

Boyd

Cat class

II  
aguajito  
Spring

2-C



2-E

Traplins in  
San Matias Pass  
March 26 -

22 Dip. 5 tail  
4 " 4 tail  
3 *Peromyscus m.*  
1 " *Peromyscus*

Huey

52 Traps

cutal

camp

wash

Diabolito Spring

Harbison  
40 traps

10 Dip. - 5 tail  
2 " 4 tail  
3 *Perognathus fallax*  
3 *Peromyscus m.*

32 Traps

10 Dip. - 5 tail  
1 " 4 "  
3 *Peromyscus m.*  
1 *Onychomys*

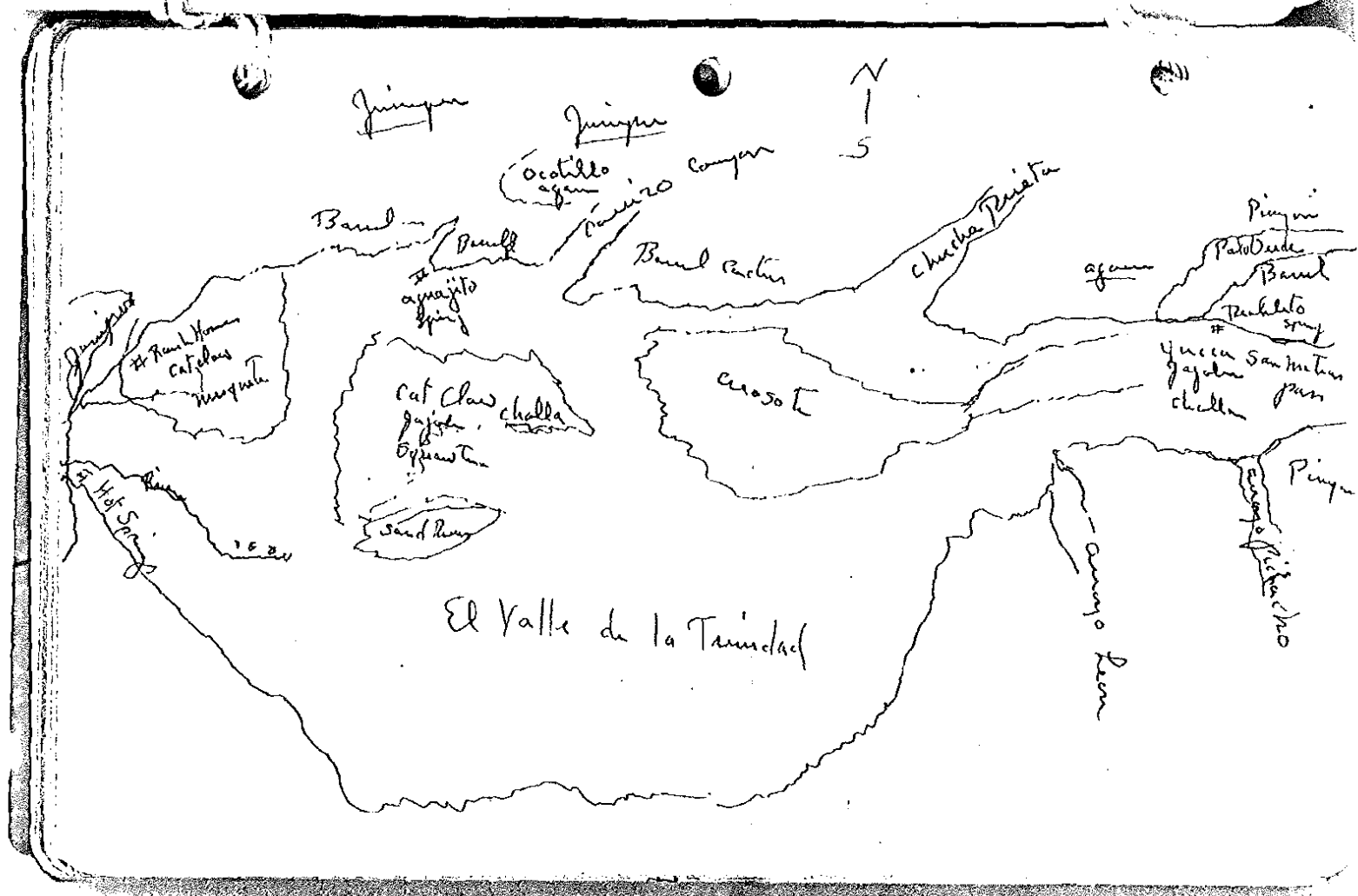
March 22, 1936

Rain kept us in all day but the boys managed to get out and bring in all the mouse traps.

March 26, 1936

The rainy spell of the past week broke this morning as the sun came up in an almost cloudless sky. However, everything was sheathed in ice. The tent was frozen as stiff as a board, ice was on the water bucket. Snow blanketed the crests of all the higher hills in sight.

4



March 13 - April 22, 1947

Huey with Charles Harbison

Baja California, Mexico:

Barril, San Francisquito Bay,

Los Angeles Bay

March 13, 1947

Left home about 10:30, picked up Harbie at his home at 11 a.m. reached the international boundary at 12 , recorded my Zeiss lens and guns at the U.S. Customs, then into Mexico.

The Mex. customs officers looked over my permit and after consulting different law books for half hour directed me with a lad from their office to the district military Hdqts. in Tiajuana.

Here I was told to return at 4 p.m.. It was then 1 p.m. so we returned the lad to the Mex. customs house at the boundary, waited at this station until 3:45 p.m., made couple of pictures of the international gate.

Returned to the Mex. military Hdqts. and was received at 4 p.m. by Com. Manuel Espinoza, a very delightful gentleman. He signed my permit and after a few pleasantries we left for Ensenada at 4:30 p.m.

Arrived at Ensenada at 6:10, filled with gas and bought 5 gals. cylinder oil as the car seemed to be using an unusual amount of oil. It was dark when we left Ensenada. At Lagrulla a Barn owl flew across the lights in front of the car. Made camp about 5 mi n.e. San Vicente. The new road was beautifully graded and could be traveled at good speed.

March 14

Left camp at 7 a.m. and was again running on the graded highway about 5 mi south of San Vicente. I saw a Mearns thrasher flying into a thick cholla patch. This is the most northerly record I have ever seen. Graded road ended near San Antonio del Mar.

Over the mesa near San Telmo I stopped the truck and found fresh sign of Dipo. gravipes, noted many Lark buntings in small flocks all along the route. Also all during the day from San Vicente until we camped 5 miles east of El Roasio. All Valley quail were paired off. Near Socorro a large number of Black brant were seen swimming just beyond the breakers. Possibly 5000 would be the number.

Road was extremely rough after the graded part was left so travel was very slow.

Picked up a horned toad near Santa Maria, saw another. Caught a gopher snake at 25 miles north of El Rosario.

Made camp at dark 5 miles east of El Rosario.



March 15, 1947

Up at daylight and left camp about 7 a.m. Rough roads yesterday caused leak in water tank. Am losing all the water so will have to have it mended at the Onyx.

Saw a robin when crossing the river bed near camp at El Rosario. All along the way mated pairs were seen. This is the first time I've ever seen this pairing in this region. Region very dry this year but am told that tremendously heavy rains fell in November, washing out many spots in the region between El Rosario and El Marmol.

During the day again many small flocks of Lark buntings were seen and many flocks of Gambel sparrows were seen.

Saw a Red-tailed hawk sitting on nest in cirio when ascending Aguajito canyon.

Arrived in El Marmol about 4:30 and had to empty the car of its cargo, empty the water from the tank and have it resoldered.

March 16

Morning broke with a sky filled with wind blown clouds. Made a 6:30 start, filled water tank at well 4 miles west of Onyx thence back again to take road south. After few miles we were in a granite area where the cirios were at their best. Found a Red-tailed hawk's nest in cirio along side of the road with old bird sitting. Shot 3 shots with 22 at trunk of cirio near nest but she wouldn't leave. Finally Harbie and I walked over to the tree and gave it a sharp pick - off she went perching on nearby cirio, didn't yell as is often the habit of these birds.

Lark buntings were found in small scattered flocks all along the route. This species seems abundant this year. Roads very rough and bad so had little time to look. Stopped for occasional plant specimens when Harbie saw interesting things. Quail are still in pairs.

Stopped for lunch about 15 miles north of Chapala Dry Lake, saw much fresh gopher work along the dry creek bank. Probably new race of gopher. Day overcast with high clouds but does not seem to be threatening rain. Hope to run beyond it.

At a point about 25 miles north of Punta Prieta the first small flock of quail were seen. This is the first non-breeding bunch to be seen since leaving San Vicente where our

daylight observations began. This region (Punta Prieta) is extremely dry, however, and does not seem to have had any rain at all this season. I was told at El Marmol that 2 heavy storms had occurred during Nov. and Dec. causing considerable washing in the poor road. However, some annual growth was evidently caused by these storms. These storms did not reach below Lake Chapala.

Made camp about  $\frac{1}{4}$  mile north of Punta Prieta on a hill top. The sky cleared of clouds at sunset but by 10 o'clock rain drops began to patter on us and we bundled our beds up, put them in the truck and sat in the seats, just in time as a tremendous deluge commenced.

March 17, 1947

Rain fell in torrents most of the night and we were unable to get out of the car for breakfast until after 9 a.m. Showers fell off and on all day.

Tried to hunt but cold and dark with nothing of interest out. Harbie found an old fallen cactus (cardon) where he collected insects for part of the day - between showers. Looks as though we were stuck for several days. Water tank again leaking. That too is bad.

March 18

Weather clearing a bit with no rain falling during the night so we packed up and left. Found Louis Parra on his way north at the village. He had had a rather muddy time for over 20 miles yesterday. Found few quail in bunches near Punta Prieta. Lark buntings still dominant species. Saw pair of White-winged doves, vanguard of the greater numbers that will follow. Road alignment considerably changed since 1941 but rougher if anything and every chuckhole full of water.

After about 25 miles of up and down hill the Llano del Perdido was reached. The whole region appears to have been through a terrific drought. On the llano hosts of Clay-colored and Gambel sparrows were seen. They were gathered along the small washes where the vegetation was of slightly better condition and more food available. Saw a small deer (female) as it jumped across the road.

In spots all along the route we gathered plants, found several that neither of us had ever seen before.

Arrived at El Arco at sundown and find the road to San Francisquito Bay and Barillos open.

March 19, 1947

Spent the first starlit night comfortably in our sleeping bags. The past two have been spent curled up in the truck seats - a most uncomfortable way to spend a night! Wrote notes home and on our merry way. Water tank leaking and everything.

The course led to Aleman thence eastward through the old diggings for about 3 miles. The rolling hills were replaced by a wide valle through which was growing the most magnificent forest of giant cactus I've ever seen. Miles and miles of these huge giants up to 50 ft tall.

The cirios were beginning to thin and were to be found mainly on west and north exposures.

Running out onto a wide rising mesa I followed the tracks of a truck that had left Aleman yesterday. In fact two cars had left - one a small touring car was bound for Baril, our destination. By mistake I followed the truck. After 6 miles the end of the road was reached at La Union Rancho. This is a pretty place situated in a small well watered valley.

After finding out where to catch the right road I asked about different birds and was told that cardinals are to be found at this station. Saw fresh gopher sign in the wash. Probably a new race of Thomomys.

Getting back on the road to San Francisquito Bay-Baril. This region was of tremendous interest. There were great groves of huge cardons growing in the sandy river bed through which the road ran. Travelers had had a great deal of trouble on this road as there were many places where a cover of brush had been laid in the sand. The farther eastward we ran the more arid the region became. There were numerous patches of northern ocotillo mixed with the peninsula form.

A rock corral called "El Junco" was passed and a few miles farther on a rancho was seen  $\frac{1}{2}$  mile off the road towards the northwest. This place was deserted and called "rancho Lagunitos".

This region looked productive for mammal and some gopher sign was seen. The locality is on the desert slope. Below this place the road ran into a narrow rocky fill of granitic type rocks. A ground squirrel ran across the road and I tried

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stalking it without luck. This too is without question a new race - no doubt of the mid-peninsular species.

Then came a sharply winding hill that was three times as long and as steep and rocky as any hill I've ever tried to drive a car over. This is the "Questa Malo" I was told about in El Arco. From this hill the road ran down a long long desert slope towards some desert hills that bordered the gulf. Annual growth was sparse and becoming dry. Caught a horned lizard about 10 miles east of Barril.

Great thickets of the peninsula ocotillo were seen and the characteristic copals. The elephant tree of the western side was missing. Birds have been extremely sparse but the attention of the driver could not be directed from the road so observations were not widespread.

Arrived at Barril and found a small group of 3 or 4 houses occupied by a single family. Talked to the owner and had a cup of vile coffee which had to be drunk. Made camp 100 yards west of the house near a large broken concrete reservoir.

Went down to the beach for a few moments and made a circuitous walk through the nearby brush scouting for trap line sites.

Each of us ran out about 40 traps apiece this evening. Black pitaya and Schottii cactus, peninsula ocotillo, copal (2 kinds) were the common shrubs on sandy granitic soil. I was told that a terrible dry spell was just ending 6 years with but one or two showers. Cattle had almost all died off so the mammal collecting looked badly.

Looked at our traps about 8:30. No luck. Caught 1 *Dipodomys merriami* by flashlight. Harbie caught insects around camp-light till 10 p.m.

March 20, 1947

Traps held 3 species this a.m. 3 *Dipodomys merriami*, 2 *Peromyscus eremicus* and 4 *Peromyscus maniculatus*. Some sign of *Perognathus* but none taken.

Set up camp. Harbie off after plants. Old man came up to camp with half dozen fresh carrots, 3 beets and a cabbage, later a new species of cactus, much like the "Queen of the Night" found in So. Arizona. This place is certainly an interesting region. The mixture of 3 faunal areas.

Rebaited the traps this evening and at sundown a violent wind that threatened to blow the camp away.

March 21, 1947

Traps held 5 *Dipo. merriami*, 1 woodrat, 1 each of 2 species of *Perogn.* and *Peromyscus*. Beautiful sunrise had us out making sunrise pictures this a.m. Harbie busy with yesterday's plants

Saw 30-35 Lark buntings on level ground near camp. Americ. egret seen on beach yesterday was up dried wash  $\frac{1}{2}$  mile from sea. Red-tailed hawk flying over camp. Buzzards and many ravens about.

In late afternoon I went down to the beach, turned over few rocks and found few shells. 10 Heermanns and 8 Yellow-footed gulls on beach and 3 Elegant terns flying near water's edge. Saw hummingbird (Costa?) catching flies over edge of sea where flies were swarming above rotten sea growth.

Set long line of traps this evening. Harbie set nearer shore line I set inland from camp.

Harbie brought in 2 horned lizards he had found copulating on cow trail near beach. They were belly to belly. The sun was hot to Sonny's back and the sand was hot to Molly's.

March 22

Traps held tremendous catch this a.m. 9 *Dipo. merriami*, 6 *Perogn. arenarius*, 4 *Perog. baileyi*, 2 *Neotomas*, 10 *Peromyscus maniculatus*, 3 *Peromyscus eremicus*, 34 species, not all were saved.

Skinned all day. Harbie off to well wooded canyon 1 mi south camp. Reported many beautiful plants, blue morning-glory, Pala Blanco trees abundant and other cape forms. Found occupied osprey's nest on top of 16 ft cordon. Saw kingfisher (Belted), Green heron, female cardinal, 3 jays, Ash-throated flycatchers, Violet-green swallows over camp. 50-60 Lark buntings around camp.

Five cowboys came into camp again this evening watched me skin kangaroo rats with much pleasure, brought 5 sets of rattles from snakes they had killed near rocky hills north and west of camp (4-5 miles). Said that rattlers are more abundant when days and nights are warmer. So far neither Harbie nor I have seen one.

Harbie set 50 traps and 4 Schuylers.

March 23, 1947

Traps held 2 *D. merriami*, 1 *Neotoma*, 4 *Peromyscus eremicus*, 7 *Peromyscus maniculatus*, 11 *Perognathus arenarius* and 1 *P. baileyi*.

Harbie took 38 this a.m. to bring in birds. No luck. Shot at a shrike and 2 jays.

Been losing too many traps so we decided to tie them. Harbie set 30 tied traps and 6 Schuylers.

March 24

Traps held 1 *Ammospermophilus*, 1 *Perognathus baileyi*, 4 *Perog. arenarius*, 1 *Perognathus spinatus* (probably new subsp.), 4 *Dipo. merriami*, 3 *Peromyscus maniculatus*. On our way back to camp one of the Mexican boys brought out a can in which a woodrat had been trapped. I reached in and grabbed him much to their amusement.

Rebaited traps in evening.

March 25

Large migration of white-winged doves passed by just after sunrise, must have been several thousand.

Traps held poor catch so picked them up. Harbie hunted birds for me today. Many Lark buntings still about and several flocks passed by stopping to feed on cleared area near camp.

In afternoon I shot a White-crowned sparrow (Mar 24). Harbie had nice collection of birds, 1 gnatcatcher and 3 woodpeckers (*scalaris*) were breeding birds.

Numerous Violet-green swallows about. Several ravens. Many Turkey vultures that came almost into camp for refuse from skinning board. Costa hummers are abundant. Saw pelicans over gulf.

Traps were set over rocky north slope of nearby canyon this evening.

March 26, 1947

Traps held 2 immature *Neotoma*, 3 *Perognathus spinatus*, 2 *Perognathus formosus* (both probably new to science), 9 *Peromyscus crinitus* (also likely to be new).

Harbie off for canyon called \_\_\_\_\_ which lies about 3 miles south of camp. There is the only place he has found the blue morning glory in flower. This place is extremely interesting botanically. It seems to be the blending point of cape flora with that of Sonora-Colorado desert and some west coast species. This of course has its affect on the bird and mammal fauna, making this section not only one of the most interesting spots but critical areas of the entire peninsula.

Water tank now empty so borrowed soldering iron from Sr. Arturo Valiciencio and mended the thing again. This time for keeps, I hope.

Cowboy brought in a live rattlesnake this evening for which I paid him a peso.

Harbie rebaited traps that had been set over the steep partly rocky edge of the nearby arroyo.

March 27

Traps held poor catch this a.m. 2 woodrats, 1 *Perognathus baileyi*, 6 *Peromyscus crinitus*. Line was picked up. Harbie hunted for me today and brought in 1 jay, 2 mockingbirds and 1 Cactus wren. Saw a caracara flying by this a.m. Shot a Violet-green swallow over camp. Dissection proved it to be a laying female. They must be nesting in cliff faces along the arroyo.

In the evening the cowboy brought in 2 live rattlers.

Harbie set his line over the same general hill side again this evening.

March 28

Catch poor, did not get a very full catch so all traps were brought in as we plan to move camp to Bahia San Francisquito tomorrow.

Saw many Violet-green swallows about camp today.

Spent afternoon packing up.

March 29, 1947

Left Barril about noon, was told by Don Arturo Valevicentio that there was a short cut to San Francisquito Bay near the coast. The turn-off was located and after following it 3 mi found the road led up a very sandy wash and as no cars had been over it for over a year turned back and took the longer route. The road led up a long desert slope flanked by rounded granite hills on either side. About 6 miles up the slope a jay was flushed from her nest in an iron wood tree the branches of which scraped the car side as we passed. The nest was well built of sticks bound with grasses and held 3 slightly incubated eggs. It was located about 5 ft above the ground. I took both nest and eggs.

Finding the plainly marked turn-off we again headed eastward towards the gulf. About 3 miles from this road junction an agilis type kangaroo rat was seen across the road in front of the truck. This was exactly what we sought so it was resolved that should the environs of the bay be poor collecting we would return to this point.

This road too had not been traveled for much more than a year. Cactus (cholla) plants a foot high were growing in the center of the road. A great stand of drying lupines proclaimed a copious rain had fallen early in the winter. The flowers had largely passed and the greater part of the plants were in the shattering seed stage. Must have been gorgeously beautiful a month ago.

This gradual descending road led almost due east and after crossing a small alkaline playa the most beautiful land locked bay came into view from the low sandy pass.

The region did not look like good trapping ground but we both set out our trap lines. Looked at them about 9:30 p.m. and found 1 *D. merriami*. A coyote had removed 2 *Perognathus* as their tails were still in the traps and the traps stretched out straight. Heard Horned owls hooting during the night.

March 30

Traps held poor catch, 5 *D. merriami*, 4 *P. arenarius* and 4 each of *Peromyscus maniculatus* and *crinitus*. So picked them up and plan to go back up the road 6 or 8 miles this afternoon.

Birds were few but species were well represented. Heard quail calling, saw 2 ravens, more buzzards, 1 pair Gila woodpeckers, 1 pair flickers. These 2 species were in the few scattered cardons nearby. Heard Cactus wrens singing



and saw a lone very shy Sparrow hawk. Harbie picked flower specimens and found a rattlesnake in the sand dunes near the bay. I shot and pickled it. Spent a couple of hours scouting about the bay, made a few pictures. Harbie off to the Mt. top east of the place. All in camp by 1 p.m. packed up and left.

On the bay I saw 8 Surf scooters and a dozen R.B. mergansers. A Spotted sandpiper and a lone Greater yellow-legs were flushed from the rocks. Several pelican skeletons were found on the drift piles. Beak looks smaller and shorter than those about San Diego. Saw many cast off shells in drift piles.

Picked up a horned lizard about 1 mi west of the bay.

Made camp 7 miles west of San Francisquito Bay. A rising rocky hill with a huge curving dyke of granite lays just south of the camp. A few medium sized cordons and a great deal of other brush including 2 species of ocotillo, ironwood, creosote, cholla and the ever present black patahya form a fairly heavy chaparral. Kangaroo rat sign is abundant. The area is of coarse granitic sand. We set out all our traps. Have an abundant supply of very fine wood for fuel.

March 31, 1947

At least I have located the 5-toed kangaroo rat. The traps held 5 of *D. agilis* this a.m., 7 *D. merriami* and 1 *Perognathus arenarius*.

Birds too were fairly abundant, a few migrating Gambel sparrows were about but scattered flickers, Gila and Cactus woodpeckers, Cactus wrens, 1 pair of ravens were noted. A pair of Horned owls have their nest in the rocks on the hill side above camp and kept hooting all day long a habit I've never had before.

Rebaited the traps again this evening. After dinner as we were quietly sitting by the table after dark the Horned owl came into camp and was shot from its perch on top of a cardon. It is the smallest Horned owl I've ever seen.

April 1

Traps held a fair catch this a.m. 4 more *D. agilis* and 8 *D. merriami*, 2 *Peromyscus* and 3 *Perognathus*.

Harbie off after plants and insects. This locality seems very unproductive of the latter but the plant life is abundant and hasn't been eaten off by cattle.

Rebaited our traps at sundown. This a.m. Harbie climbed the mountain near camp and found the owl's nest. There was an egg just hatching and the shell of another that had been broken. Did not see the female owl. A roadrunner kept calling from the ridge near camp but I couldn't catch sight of it.

April 2, 1947

Traps held 5 *D. agilis*, 6 *D. merriami* and 1 *P. baileyi*. During the day 1 *Ammospermophilus* was caught. We each moved half of our lines this evening.

I went for a short hunt about camp, picked up few birds and saw many migrants of Amber and Clay colored sparrows. Old female owl hooted all day today.

Harbie found many new and interesting plants, mainly cape forms.

April 3

Traps held poor catch this a.m. only 4 *D. agilis*, 3 *merriami* and 1 *Perog. baileyi*. The moon is nearing full and I blame this very bright night to the light catch.

Went hunting west of camp this a.m. Saw many pairs of paired quail, shot at a towhee, killed 1 Desert sparrow, 1 Gambel sparrow, 1 Black-headed grosbeak (migrant), 1 jay and 1 Gila woodpecker. Saw 2 pairs flickers, several Gila woodpeckers and many pairs of Ash-throated flycatchers. This is the most abundant bird. Mockingbirds are not uncommon. White-winged doves were fairly common crowing from the tops of the cardones.

Baited our lines again this evening. A terrific west wind came up at sundown and a bank of low clouds were visible to the westward.

April 4

Traps held 3 *D. agilis*, 5 *D. merriami*, 1 *Neotoma* and 2 *Peromyscus*. Picked all traps up as we plan to leave in the morning.

Saw a pair of jays with 2 half-grown young ones while picking up my traps. Tried to catch one of the young ones but the cactus thickets were too much for me.

Red-tailed hawk over camp during afternoon. No traps out tonight as we plan to move on tomorrow.

Chased poorwills after sundown but have had no luck with them. They are hard to get into the flash beam and when I do catch them they leave. Have not heard Elf owls since the recent night at the camp.

April 5, 1947

Full moon last night and cold. Thermometer in car was 36° at sunrise. Day calm and we got away about 7:30.

Stopped along the way to gather plants. Found a Cactus wren's nest beside the road with newly hatched young 6 miles from our campsite.

Up the steadily rising slopes through myriad cactus forest then into yucca and as the canyon closed in a mine was seen on a nearby hill side and we investigated for bats. Shaft almost vertical and no ladder. Several rocks revealed water at bottom and over a 100 ft deep. Lots of very pretty turquoise blue specimens about.

Up the "Malo Questa" which was not so bad as I had thought when descending.

Near top of this hill I hunted for ground squirrels. Shot one that fell into a rock pile and could not be seen for recovery. This is certainly a new variety and unaccountably rare being in light granite boulder terrain!

Found a quail's nest with 10 incubated eggs which I left. The nest was made of a few gathered straws placed in a slightly depressed place scratched in the sand by the parent bird. This was neatly tucked in between two parallel rocks that were just wide apart enough for the nest. A bush shaded the crevice, female bird flushed from underfoot. Old male on rocks nearby called and acted nervously while I was about.

Driving on we were now on the Pacific slope.

Stopped for plants and finding some "new to us" - yellow flowering shrub. Noted fresh gopher workings while picking them. Decided to stop and collect at least a short series. This locality was about 1 mile east of Rancho Lagunitas and near some lava hills in the middle of the great yucca covered slope. Birds were abundant - White-winged doves, Cactus wrens, Gilded flickers, Phainopeplas, gnatcatchers, Cactus woodpeckers, Gila - a couple of ravens and the usual buzzards.

Set 4 gopher traps and by sundown had 5 specimens which I put up while perched on collecting chest up in car. At sundown 2 White-winged doves, evidently a pair from their actions, came to roost in a nearby palo verde. I thought at first they had a nest and after frightening them away found it to be a regular roost as a large spot of fecal matter was underneath the limb.

Charlie set 15 mouse traps near camp.

After dark a Perog. arenarius came up to the back of the truck and Harbie caught it with his hand and flashlight.

April 6, 1947

38° at sunrise. Traps held 3 Dip. agilis, 1 D. merriami and 1 Perog. spinatus. Several more gophers were taken this a.m. Broke camp and left about 1:30. Stopped to look over the shacks at Rancho Laquinitas. A huge stone corral was the chief structure. An air sock and large level field marked this spot as an emergency landing field and is probably on new maps. Shortly after leaving this place the cirios became more abundant although a few had been seen when the summit was reached.

About 4 miles on a horned toad was caught running in the wheel track of the road. Drove through the giant cactus forest for miles then turned back into a cross road to Rancho Union where I had seen gopher sign on our way out. Set 8 gopher sets amid cactus in valley floor.

This place is heavily overstocked and is now badly tramped out. 3 weeks ago it looked beautifully verdant. A tremendous growth of chollas was found and the reason for its abundance was seen in the way the cattle fed. When they sought some protected bit of green growth that had sprung up within the shelter of the cactus they would brush the cholla off with their faces to reach the tidbit thus scattering pieces of the cactus plant to sprout new growth.

In the evening Elf owls were heard, not many but at least 3 pairs within earshot. With the flashlight I found one and shot it.

Poorwills also were heard calling from nearby rocky hillside but couldn't get them into the light. Charlie set up a dozen small traps near camp. A nearby resident of the Rancho Union came in to see us and told of cardinals being present.

April 7. 1947

Elf owl so unique I decided to stay another day and try for more. Hunted near camp. Found 2 pairs of cardinals, collected 1 pair. Brown towhees of which I was very surprised when first hearing them as they had a call note that greatly resembled the Spotted towhee of the north. the usual Cactus wrens, Gila, Cactus and flickers were here. Ariz. hooded quails. Heard Barn owl screech in night.

Traps empty this a.m. Harbie off after plants. This evening I heard Elf owls in two directions but though I was out until 10 o'clock I could never get up on them. During night one came into tree in camp but was moving too fast. I pursued the bird clear across the valley but never got into the flash light beam.

Poorwills again calling on rocky side hill. Caught one in light beam but too far for shot. It flew into the air while still in the light but got behind a giant cactus and was off.

April 8

40° at sunrise. Traps held 3 *D. agilis*. Broke camp and left. Arrived at Almalli about 12:30. Bought a gopher for a peso, filled the car water tank with good water for a peso. Over to El Arco where a fellow had a horned toad for which I had to give 2 pesos. Filled the gas tank and left about 3:30. Saw a Harris hawk 10 miles n.w. of Arco. Made camp 1 mile west of Mesquital at dark. Fog covered the hills to south but did not drop to ground level. Cold wind blowing. Heard poorwills calling from nearby mesquite wash.

April 9

Up early this a.m. broke camp and on our way by 6:30. Collected many botanical specimens along the Llano del Perchito. Caught horned toad 10 miles s. Punta Prieta on rocky terrain. Caught up with stage at Punta Prieta and sent 2 hastily written notes, 1 to Fisher, 1 to Mrs. C.

Left Punta Prieta about 3:30 for Los Angeles Bay. Cold brisk wind from west. This region was green and lush, all the cirios had leaves and the brush was fully leaved. This was the most verdant area observed on the whole trip.

Arrived at Los Angeles Bay after dark, made camp  $\frac{1}{2}$  mile north of town.

April 10, 1947

Found Mr. Daggett and got directions from him about the country to south. Found that George Lindsay had been in yesterday. He was a member of a yachting party wandering around the gulf.

Found out that a road ran south for about 15 miles. 12 miles south however was located the old mining town Las Flores. This place was found to be in almost the center of a huge valley that ran up from the gulf. The flora was of extreme interest. A tremendous forest of giant cactus was found starting just beyond the salt water line at the bay. A few mesquites and ironwoods were seen but this type of growth must long have been chopped out to fuel the 3 large boilers at the old mill which must have run in the 80's. A huge clump of tailings gave evidence of several years of operation.

Searching about much mammal sign was found including pocket gophers. Set 10 traps as soon as camp was established. This *Thomomys* seems to like the apricot mallow plants which are growing abundantly.

On the way up I saw a shrike, Violet-green swallows in the cardon near a little rancho 6 miles from L.A. Bay. Gila woodpeckers, Cactus wrens, Gilded flickers, Cactus woodpeckers. Great flocks of Lark buntings, a few White-crowned sparrows, but the road was so sandy that it took almost my entire attention to keep the car going right.

Spread the old tarpaulin over an empty adobe wall and made a shelter in which to work. After lunch walked a few hundred yards west. Saw a pair of thrashers (San Lucas), heard Cactus wrens. The usual raven flying about camp when all humans have left.

Looked at gopher traps and by 4 p.m. had 5 specimens, all with black face and without question a new race! Looked at traps about 9 p.m. *Dipodomys merriami* swarming. Our combined lines were 100 mouse traps. They held 6 *Perognathus arenarius*, 4 *Peromyscus maniculatus* and 20 *D. merriami*,

April 11

The combined total of the catch last night was 35 *D. merriami*, 8 *Perognathus arenarius* and 7 *Peromyscus maniculatus*, an average of 50%, a tremendous catch indicating an over population of rodents. Two more gophers this a.m. Rebaited traps this evening.

April 12, 1947

Catch not as abundant this am. Only 20 merriami, 1 Peromyscus m. and 1 Perog. arenarius, Picked up traps this a.m. Harbie found some large appearing burrows that he thought were large kangaroo rats. Set 6 Schuylers this evening.

April 13

Violent wind came up just before dawn and threatened to raze camp. Kept it up all day long and a more miserable day I've never spent in camp before. Caught few gophers. Harbie's Schuylers held 2 D. merriami. Set more gopher traps.

April 13

Schuylers held more D. merriami so gives there are no large Dipos. here. So started packing up to leave tomorrow. Harbie brought in a gopher he had captured in a Schuyler trap. The beast must have been out in midday.

April 14

Packed up and left this a.m. Saw a shrike near camp. Drove around the south end of Los Angeles Bay but saw nothing worth spending the night for. Had a good refreshing swim in gulf. Made camp for night in south end of Agua Armarga valley. Each set out a line of mouse traps through creosote growing in sandy soil.

April 15

Traps held 5 D. merriami and 5 Perog. arenarius. Some scattered gopher sign. Tried to set but ground too dry. No use trying to catch desert gophers in powdery dry sand or soil.

Dipos looked so different that I decided to try another night for more. Set out all our traps through creosote sandy soil valley floor.

April 16

Traps held 14 D. merriami, 1 Dipo. agilis and 8 Perog. arenarius. The agilis was a surprise. Put up the skins and packed, leaving the place about 2:30. Day terrificly hot, 104° in car.

Tried to find short cut road that intercepted truck line some 30 miles north of Punta Prieta but got twisted up in some off roads that led different ways and by sundown we were in Punta Prieta where we spent the night.

April 17, 1947

The plant life here was especially lush so spent a couple of hours getting specimens.

Up the road about 18 miles picked up a horned toad. Gave the road to a XX Mex truck and got stuck. The Mex. was aware of our predicament but drove on. Spent 3 hrs. digging the truck out of the sand and getting onto the road again. No more road courtesy to Mex. trucks.

Camped in granite boulders about 5 miles north of Catavina.

April 18

Off to a 7:30 start this a.m. but made pictures through this interesting region and progress was slow. Found Red-tailed hawk's nest in cirio, young downy but large enough to stand up. About base of cirio coyote feces were seen and evidence of a fallen young hawk where it had been pierced on an agave and eaten by the coyote. The beast made nightly calls in search of tidbits that fall from the nest. I picked up the tail end of a racer that had been partly eaten by the hawks.

Gassed up at El Marmol, picked up horned toad 2 miles east of San Agustin.

Found lots of interesting plants after leaving San Fernando Mission. Camped for night about 15 miles north west of the mission near a newly built rancho called Rancho Arenosa.

We each set a line of traps over rocky agave covered hillsides. A Scott oriole sang his evening song from nearby cirio and two quail, male and female, came to roost in a basked formed cirio top a rod or so from camp. Harbie sick - probably got some plant poison.



April 19, 1947

Traps held 1 *Dipo. agilis*, 6 *Neotoma*, 3 *Perog. fallax* and 3 *Peromyscus eremicus*. Viscerated them and left. Roads extremely rough. Saw many Lark buntings along the route to El Rosario. At the village a Prairie falcon was seen rising from a stoop where it had taken a chance at catching a young chicken.

Along the coast several large flocks of Lark buntings were seen and at Socorro about 2000 Brant were feeding on the green sea lettuce along the ocean shore.

Made camp about 7 miles s.e. San Quintin where traps were set over the cactus and agave covered hill sides on the big terrace. Hope to catch *Perog. baileyi*.

April 20

Traps held 2 *Neotoma*, 1 *Dipo. merriami*, 1 *Perog. fallax*, 2 *Peromyscus* and 18 *Peromyscus eremicus*.

Rebaited traps this evening. Looks like rain tonight.

April 21

Traps held poor catch, 8 *Peromyscus eremicus*, 1 *Neotoma i.* and 3 *Perognathus fallax*. Saved only a few. Packed up and left.

Spent the night at the old camp ground about 6 miles north of Sto. Tomas under a huge live oak tree.

Heavy overcast sky promised rain but the night was dry.

April 22

Up early after Screech owl had kept calling in the nearby oaks most of the night.

Showers fell after breakfast but all the camp had been packed so no damage.

Arrived at International Boundary about noon, passed the customs with but little trouble and home about 2:30.

June 14 - June 24, 1947

Huey and Phillip Lichty

Santa Catarina Landing, Baja California,  
Mexico

incomplete - last part of notes missing.

Santa Catarina Landing Trip - Phillip Lichty, L.M. Huey

June 14, 1947

Left San Diego 9:00 arriving at International Boundary. Declared guns and 1 camera lens in U.S. customs. Expected some delay at Mexican side but was wafted across without stopping the truck. Great!!

Day overcast with high fog and rolled along smoothly over a more improved road than ever before.

Stopped for night at a point 3 miles south of San Telmo about 4 p.m. On stepping out of the truck found near left tire going flat, spent 2 hours getting spare off rack and replacing. A sharp rock had punctured it.

Set 50 mouse traps over some sparsely brushed flat ground. In this spot I had previously noted signs of *D. gravipes* and as it represented the northernmost point of habitat for the species was anxious to get specimens. A short growth of annual plants with only dried stems new shown was present and through this long well beaten *Dipo.* trails could be seen where these animals visited each others burrows. Some trails over 75 ft in length were noted connecting holes. Looked at traps by lantern light 9:30 p.m. 1 *Dipo. gravipes*, 2 *Perog. fallax*, 5 *Peromys. maniculatus*.

June 15

Traps held this a.m. 1 *D. gravipes*, 7 *Perog. fallax* and 6 *Perog. maniculatus*, all that were saved as specimens, dated 6/15.

Packed up and left at 9:30. Soon after starting a gopher snake was caught crossing the dusty road. Near Camelow a black racer was caught. Travel was very slow as the rough dusty roads were difficult driving. Day pleasant and cool.

Near Sta. Maria saw a Red-shafted flicker and when going down canyon 2 mi e. Socorro a Cactus woodpecker was seen acting peculiarly on an agave stem. Stopping to investigate an old nest hole was found in a dead dried agave plant. A black racer stuck his head out of the hole. Evidently the reptile had been the object that had caused the woodpecker's peculiar actions. The snake retracted deep into the hollow stem so we rolled the agave into the creek bed and set it afire. Needless to say the snake came out!

Quail in small flocks were seen along the coastal plain between Socorro and El Rosario. Arrived at El Rosario about dark. Our aneroid showed 900' on the mesa above and 3/9 miles 100' at the village. An American egret was seen flying towards the sea in the failing light.

June 16, 1947

Broke camp at 6:30 this morning. Saw many snake tracks in dusty wheel tracks on valley floor but none were seen after the mouth of Aguanita canyon was reached. Road terrificly rough and travel slow. Agave goldemanni blooming profusely over higher hill tops and cirios were beginning to show flower crests.

Small coveys of quail 8-10 probably family broods seen along the way. Collected plants all along the route. Road badly cut up all along and every flat place was a dusty mass. So travel was slow.

Made camp for night 3 miles west of Onyx=Marmol near their well. About 40 traps were set through the low brush, creosote and malapi ground.

Single bat flew about camp in dusk and during night. Phillip saw it flying in and out and through the open doored truck! Picking up the flies we had brought along with us. We hunted for snakes with flash light for an hour or so last night without results.

June 17

Fog rolled in over the plain just before sunrise and cleared about 6:30. Traps held 6 *Dipo. merriami*, 1 *Dipo. agilis*, 2 *Peromyscus maniculatus* and 2 *Perognathus fallax*.

Pair of Leconte thrashers kept calling from nearby yucca. Black-tailed gnatcatchers and Desert sparrows seen.

After preparing the specimens drove on into El Marmol, called on Kenneth Brown and had a flat tire repaired. Left the Onyx about 2 p.m. and began searching for seeds of penstemon. Found them scattered through sandy washes in area 4 mi s. of Onyx. The seeds were not too well matured but the older stems were selected and will probably be old enough to fill out from moisture in stems. Found rear left spring broken on truck. Drove on down to within 2 miles of Catarina, camped for the night.

Set 40 traps over lightly brushed granitic soil amid huge granite boulders. Shot pipistrellas (bat) over camp in dusk.

June 18, 1947

Heard Horned owl during night. Birds were not common. A pair of White-winged doves nearby kept calling. Flicker seen and pair of Gila woodpeckers noisily calling. 1 Costa hummer, several pairs Ash-throated flycatchers and single Violet-green swallows.

Prepared specimens and left camp about 2 p.m. planning to stop a mile or so south of El Marmol so that an early start tomorrow can be made on the spring repair.

Set line of traps through rocky sparsely brushed hill side where lots of small agave plants were growing.

June 19

Traps held 1 Neotoma, 5 Perognathus fallax and 4 Peromyscus eremicus.

Into El Marmol for repairs. Left about 2:30 p.m. bound west for the two proposed stops, one in the giant cactus forest near Catarina and the other at the Playa.

Stopped for first camp in broad canyon well filled with large giant cactus and cirios. Vegetation all seemed nice and green though the flowering season was over. A newly established rancho called "Rancho La Ramara", alt. 1150 was nearby. This place is miles n/e Catarina.

Set 40 traps through fairly heavy growth of fruitea, cactus and other shrubs on valley floor. Small animal sign fairly abundant.

After dark Phil and I donned our hunting lights to search for owls. Ran into a family of Horned owls but neither of us made a kill in spite of the fact that we each had a shot. These owls seemed to have a high pitched single call note and perched on the top of the giant cactus. Approach by jack light was not difficult but shot was too light. The dogs at the ranch house set up such a concert of barking that hunting in the neighborhood was well nigh impossible.

June 20, 1947

Birds not uncommon at this station. Gila, flicker, Cactus woodpeckers. Black-tailed gnatcatchers, Desert sparrows and an unseen Mearns thrasher sang beautifully about camp at sunrise. Traps held fair catch, 1 *Dipo. agilis*, 3 *D. merriami*, 1 *Neotoma*, 2 *Perognathus baileyi*, 1 *Peromyscus maniculatus* and 3 *Perog. eremicus*. Phill shot a brush rabbit when on his trap line and another one later. He searched the hillside for a possible chance at the Horned owls but no luck. Found an old mine tunnel and saw 5 bats that, when flushed, flew on into the mine and down a maze where they were beyond capture.

Rebaited traps this evening and as a cold black wind was blowing we did not hunt.

June 21

Traps held short catch, 1 each of *Dipo. agilis*, *Perog. baileyi* and *Peromyscus eremicus*. After putting these three up we took equipment to capture bats and went up to the mine tunnel. Phill made a gadget out of rope, a sack and an old shirt that he hoped would block the maze. He slipped up over the cave and dropped the gadget down. It didn't work but we were lucky enough to capture 3 of the five bats. They proved to be the same species of pollen eating bat that was found in San Diego last fall. They were roosting in the entrance of the tunnel in fairly bright shadow light. Two were captured with the butterfly net and one was shot with the 22 snake gun. One was male and the other two were females, both of the latter were in a state of lactation, two rather large teats, one on either side were located close up under the wing bone and the milk glands were very large, nearly covering the side of the body.

One of the bats we saw flew out of the tunnel into the bright daylight. This bat was later flushed from within a fairly deep shaft when pebbles were cast into it. I watched it ascending for perhaps 50 ft. The shaft was about 5'x8" in solid rock. The bat circled 7 or 8 times to make the climb. The flight seemed heavy and with much effort. As it left the shaft I shot it.

Upon skinning the specimens they were found to be in good fat condition. The presence of yucca and cardon blossoms offered food for the stomachs all were filled with yellow pollen mash. One had 2 winged parasites on it which were preserved. The fact that milk flowed from the mammae offered proof that small young were somewhere in the tunnel tho we failed to find them.

While investigating the mine tunnel I found a black-tailed gnatcatcher's nest with 2 large young. It was situated in a bush about  $4\frac{1}{2}$  feet above the ground in plain view. Shall try to make pictures of it tomorrow if I get my work done in time. Phill ~~reset~~ the trap line this evening. Again at sunset the wind blew bleak and cold with scudding fog banks on the hills towards the west. Saw a lone myotis at dusk but didn't get a shot.

June 22, 1947

Traps held a fine catch this am, 2 kinds of 5-toed Dipos, 3 of one (large) and 4 of other (smaller) 3 *Dipo. merriami semipallatus* and 4 *Perognathus baileyi*. Finished those skins by 1:30 and loaded up the flash equipment and camera and went up to the gnatcatcher's nest.

Upon setting the camera both young jumped out of the nest. We caught them both after considerable scrambling. They were placed in the butterfly net and hung under a perch in hopes of the old birds getting into picture position. After about an hour and a half I found that the old female bird would not alight up on a perch on top of a bush so I changed the camera to a dried yucca leaf down low. The net holding the young was placed direct underneath. This worked well and in a very short time several pictures were made.

Phill ran a trap line over a granite hill that was well clotted with brush. Rebaited the line set on 21st. Cold again this evening.

June 23

Cold this a.m.  $44^{\circ}$  at 5 a.m. Traps held poor catch. Those on the granite hill held 9 *Peromyscus eremicus*. The old line 1 *D. agilis*, 1 *D. merriami* and a juv. *Perognathus*.

Flickers feeding young in nest hole 15 ft up in a cardon. Several families of gnatcatchers seen through the brush. All traps picked up today and reset on the flat frutea salt bush valley floor and a short line on granite boulder hill-side south slope. Saw a lone male purple martin in late afternoon.

Set up an agave blossom in can of water and braced with ropes, hoping a hummingbird would feed in camp. Didn't have long to wait. Set camera on flower and had many chances on fine pictures.

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June 24, 1947

Traps held good catch, 7 Dipo. and 1 Perogn. were caught on cactus brush valley floor while 4 Perognathus spinatus and 9 Peromyscus eremicus were taken on the granite slope of the hill.

While preparing skins pictures were taken of the Costa hummer. It became so tame that it alighted on the handle of a spoon Phil had filled with syrup.

Packed up and left for the Playa Santa Catarina Landing. The road led down Arroyo Grande = Canyon Grande? - where an immense forest of cardones are growing, passing through the quaint little village of Santa Catarina. The hills on the north faces were heavily clothed with Terote-elephanthus. Some were blooming pink with blossoms but still much too early for good flowers. After the terote were passed the brush became stunted. This was due to the closer approach to the sea.

Arrived at the landing about 6 p.m. and set out 2 lines of traps through fruitea in an arroyo bottom. Didn't look too good. Cold bleak wind blowing didn't help morale much.

Kenneth Brown had given me a note to Sr. Martinella who fixed up a comfortable room that had a board floor in it, for our stay.

June 25

Traps poor, held 7 Peromyscus maniculatus, 2 Peromyscus eremicus and 3 Perognathus fallax, one of the latter was badly eaten by other mice. A little dipo sign was seen but not a single specimen taken.

Tide was low about 9 a.m. so spent couple of hours on beach gathering shells.

Three trucks of Marmol came in and were unloaded, some blocks weighed over 4 tons.

Set traps.



June 25 - June 28, 1952

Potholes, Imperial County  
California

Potholes, Imperial Co., California

June 25, 1952

Left San Diego 9:30 a.m. bound for short trip to Bard for summer bird notes. Filled water tank in truck at Laguna Camp. Cool, windy. El Centro warm 90° with violent wind blowing from southwest.

Arrived at Colorado River about 3:30. Saw turkey vulture flying and was first bird for the trip in the Bard region. Near Winterhaven many paired mourning doves flew up from roadside. Single ground dove near Ross' Corner. Many western kingbirds on wire near highway. Many white-winged doves seen singly and in pairs enroute to Potholes. Another turkey vulture seen near upper end of valley.

Approaching the old Laguna Dam head gate a lone osprey was seen flying over the river. It circled and stooped at a fish in the spillway near the head gate but missed. Circled again and alighted on a lamp bracket atop of the head gate within 50 ft of me. On the rock in the water below a single b.c. night heron and a single snowy egret were fishing. Several meadow larks on ferns in cultivated region.

Made camp in willows 1/4 mile above Potholes. Saw 4 male yellow-headed blackbirds, many Sonoran redwings. Heard twice and had fleeting glance at y.b. cuckoo in dense thickets nearby. Male bullock oriole, 3 immature verdins, white-winged doves calling in river bottom, 1 came near and acted as tho it was trying to get to its nest. Gila woodpecker feeding young on the wing. 1 Farallon cormorant flew over. Dwarf cowbirds flying singly over willow bottom.

Just at sundown a young screech owl flew into tree above camp. It proved very tame and within half an hour 5 more joined him. It was apparently an adult pair and their 4 young.

June 26

The 6 screech owls stayed about all night. Many times I awakened and watched them with my flashlight. I had never had so close an acquaintance with the species before. Their feeding habits were very interesting. The parents would catch an insect and all would gather and would pluck a small portion from the parent's beak. I did not see any evidence of the old ones using their talons to tear food nor were they observed catching food with them. It was rather odd to see them feeding on the ground and having the young run to them on the ground like chickens, uttering a low series of cluck-clucking sounds as they ran. The young were like young of other species, always teasing their parents for food and following wherever the parents went. When perched either singly or more on a limb they would sway sideways like barn owls. When caught

by the ray of the flash light they would nod and bob their heads, blink their eyes, turn away from the light but with much curiosity try to turn one eye and the other trying to see what was shining at them. They fed and ran about on the ground much more than one would think they could.

2 Clark nutcrackers, 2 mi north Bard - Ed Hayser.

Left the camp when dawn broke and the trees were turning golden from the rays of the rising sun.

Went hunting east through the old river bottom. Found 2 doves' nests one with 2 eggs and another with two small young, both on stumps about 8 ft above ground. Colony of great-blue herons of about 40 nests in 10 large cottonwood trees. One tree had 6 nests with a total of 16 young, almost large enough to fly. 2 nests held 4 and 4 nests held 2 each. Beneath the tree which was a dead one I examined 3 small bluegills that the birds had vomited as we approached. The appearance of a person under the tree caused considerable excitement and all the young stood up on their nests to peer. Several adults were flying about at safe distances squaking an alarm note as they flew. This added fear to the young though they didn't fall off either nest or limb.

Ariz. crested flycatchers observed catching blow-flies.

Found a pair of nesting Ariz. crested flycatchers, shot the male. Upon dissection one testis was found to be developed (17 mm) and the other underdeveloped (2 mm). Nest was in old woodpecker hole 12 ft up in dead cottonwood stump. Single male Cooper tanager seen twice near camp early in morning and late afternoon visit the bird was seen to capture a large caterpillar and thrash it to death on a limb then carrying it off probably feeding young.

Cuckoos breeding in walk this a.m. I disturbed 4 different pair in the willows, shy as usual. The pair skinned both male and female had brood packs on bellies. Eggs must have been fairly fresh as the patches were not highly thickened as yet.

Shot 2 cuckoos near camp. A small yellow empidonax was shot near camp. Male with undeveloped testes.

Rough-winged swallows abundant. Cowbirds fairly abundant. Female collected held fully developed egg. Blue grosbeak, male breeding, late nesters like those on the coast.

Single wood ibis soaring high in late afternoon.

Ed Hayser came into camp about 7:30 last night, stayed until 10:45, remarked on scarcity of vermilion flycatchers (probably due to cowbird predation).

Screech owls came into camp in early evening and went through usual antics. Lone shrike flew into tree over camp.

June 27, 1952

The family of screech owls left again at breaking dawn after a night of revelry about camp. Again I was much surprised to see how much they fed on the ground and ran around like chickens on the road.

Went hunting again through the willow-arrow weed area but found little of interest. Saw two more pairs of wild Arizona flycatchers, several ash-throated. Another blue heron nest tree with 5 nests and 11 young in them. Several B.C. night herons. Snowy and American egrets. Heard cuckoo in two different places.

One gilded flicker, saw a pair of long-tailed chats but didn't get clear shot. Heard another singing in arrow weed thicket. The single wood ibis flew close overhead, probably same one seen yesterday. A lone immature white ibis flew over and circled not more than 100 feet overhead, so close in fact that I could see his bald eye and had only my little 38 cal shot gun so couldn't kill it. Shot at male Bullock oriole, failed to kill. Cliff swallows are numerous and are nesting under concrete bridges that span the large canal. Many Farallon cormorants flying up and down river.

Two cuckoos about camp today. This species seems to be very common and apparently nesting. Several blue grosbeaks about. Roadrunners not uncommon. Tracks abundant on dusty roads. Gambel quail with half grown young. Some seem to still be paired off preparing to nest. Many yellow-headed blackbirds seen flying over riverbottom.

In late afternoon packed up our stuff and drove down to Bard. Near the experimental on Colby's farm, several hummingbirds were seen feeding on gladiola flowers that were planted near the roadside. One taken proved to be a young Costa. All looked small and light colored so presume they were of the same species. Saw a pair of cuckoos fly past at this locality.

Drove north and west to reach the Picacho wash road. When crossing the drainage canal a black phoebe flew from her nest beneath the bridge (rather late record) and male joined her when she perched on branch over water. A pair of

Florida gallinules had 3 newly hatched chicks swimming in ditch. Saw many mockingbirds on Picacho road.

All of this section now under cultivation and could find no primitive ground to camp on. Turned back up the All American Canal road, returning to old camp at Potholes. At each concrete flood bridge over the canal great colonies of cliff swallows were nesting. Shot 3 specimens, many of them were young on the wing. Saw a sparrow hawk. Large tule swamps caused by seepage below the canal were occupied by red-winged blackbird colonies. Around these colonies many cowbirds were gathered. These parasites victimize the redwings too.

Owls came in at sundown as usual. Many Texan night hawks were flying from early evening until very late.

June 28, 1952

Shot cuckoo at crack of dawn. In fact I opened my eyes looked up into tree over my bed, picked up gun, shot bird.

The white-wings started cooing while the screech owls were still chattering this morning. This early bird singing foretells a hot day coming. Took blue grosbeak and another cuckoo before breakfast. Male Cooper tanager hunting food for young nearby.

Hunted out into the arrowood willow association again. Saw very few birds, 1 black phoebe, several ash-throated flycatchers, a kingbird (western) feeding two young on the wing, 1 Bullock oriole male, and collected 1 male blue grosbeak. Ground dove in camp about noon and later a family of 5 cactus wrens were feeding nearby. A plumbeous gnat-catcher in tree overhead.

Two skunks were about in daylight about 6 p.m. Numerous deer sign in arrowood-willow river bottom. Today one track looked like a huge buck.

San Quintin, Baja California, Mexico trip

Huey with Charles Harbison and Wesley Farmer

August 21 - August 24 1953

(incomplete, notes missing)

San Quintin, Baja Calif. Trip 1953

August 21, 1953

Left house 7:45, picked up Wesley Farmer and Harbie, arrived at border about 9:30. Mexican officials waved us on. Gassed up truck and on our way. Day overcast with slight breeze from west. Very pleasant. Arrived Ensenada about 11 a.m. after brief stop left at noon. Lots of new fire scars since last I was over the road.

Inland day was warm and everywhere the plant life seemed dry and sun scorched.

About 10 miles north of Santo Domingo rear tire blew out. Lost half an hour replacing with spare and now hope that this old tire holds. Gassed at Sto. Domingo.

On San Quintin plain saw Calif. ground squirrel. Had its burrow in center of graded highway. Seemed odd to see the g. squirrel disappear into the center of the highway!

At the tomato cannery I renewed acquaintance with a Mr. Franklin Frymeer whom I had met 2 years ago. He informed me that the ground squirrels had arrived 2 years past when a lot of the country had been planted to wheat.

We drove on over the highway and onto a narrow dirt road that passed a large cultivated area. Made camp in heavy brush, mainly fruitea about 3/4 mile east of the estero Santa Maria.

Each of us set 30 traps on soft silty soil with heavy cover of fruitea bush. Looked at them about 9:30 p.m. and reset sprung traps. 1 woodrat, 2 Perog. hilleri, 1 Peromyscus gambelli.

August 23

About 4 a.m. the fog came in but did not drop.

Traps held 2 woodrats, 1 P. hilleri, 6 Peromyscus m. gambelli and 1 Onychomys.

Harbie and Wesley walked down to the estero. I sat down to skin. 3 Mex. boys came by and 1 later brought in a horned lizard he had caught nearby.

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Harbie and Wesley walked down to the beach to scout for better collecting ground. Returning in late afternoon they reported good locality near the fresh water lagoon. We all set the rest of our traps tonight. This made 180 traps out.

August 23, 1953

Traps held several woodrats, 6 *D. merriami*, 1 *agilis* and about 25 *P. hilleri*. Harbie was lucky and caught a *Dipodomys gravipes* which is the southernmost so far. In my line a burrowing owl was caught by the foot in a mouse trap.

After getting up the least skins of the catch we packed up about 4 p.m. and moved down to the beach.

Each set about 30 traps amid tules and pickle weed near the fresh water pond. Meadow mice trails were everywhere. Swallows were abundant on the water. Rough-winged barn and cliff, a dozen pin-tailed ducks were seen about and large-billed sparrows were plentiful.

August 24

Traps caught 16 meadow mice, 14 harvest mice and 5 *Peromyscus gambeli*. Wesley caught 4 nice perch this a.m. Harbie had a grand day in and around the tule pond.

Rebaited traps again this evening.



San Felipe  
Baja California, Mexico  
Feb. 15 & 16, 1954 (incomplete)

San Felipe, Baja California, Mexico

February 15, 1954

Left San Diego 8:30 a.m. Took water for truck at Buckman Camp ground. Arrived at U.S. - Mexican line Calexico 1 p.m. Waved across without any delay. Day clear with slight west wind. Road perfect, paved to San Felipe. Stopped for lunch at El Major. White-throated swifts flying about.

San Felipe at 4 p.m. Village usual Mexican type with abundant kids and dogs so moved to place 5 miles north of the village. Camped on mesa above the beach all alone.

Set line of traps over hard semi sandy soil. Ocotillos, creosote and very few cacti growing in scattered array. Cold west wind set in at sundown which increased to almost gale strength by 9 p.m.

February 16

Dawn broke clear with cold brisk west wind still blowing.

Traps held 4 *Dipodomys m. arenivagus*

Rock wren and Say's phoebe about camp. Calif. gulls along beach.

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Huey with Charles Harbison and Wesley Farmer

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February 16

Dawn broke clear with cold brisk west wind still blowing.

Traps held 4 *Dipodomys m. arenivagus*

Rock wren and Say's phoebe about camp. Calif. gulls along beach.

Topotypes

Perognathus Flat, Emigrant Gap, Panamint Mts.  
Inyo County, California (Only camp in Gap).

Vicinity of Darwin & Hd. of Emigrant  
Little narrow faced. Small colonies thickets.

Dipodomys levipes (Merriam) 8 or 9 mi high up to Westward  
(5 toed)

Perognathus longimembris panamintinus Merriam (important).

Hannopee Canyon, Panamint Mts.

Thomomys scapterus Elliottt hg. (8000 ft.+) in Mt. Pks.

Head of Willow Creek, Panamint Mt.

Dipodomys panamintinus Merriam (Little colonies Rose thickets)  
Normally large sized, 5 toed.



July 14 - August 18, 1937

San Francisco Mountains, Arizona and  
area near Utah border and Zion Nat. Park

Huey, Norris Bloomfield, Leroy Arnold and  
Richard Neal, also Maj. E. A. and Luther  
Goldman and Mr. Nichols

July 14, 1937

In company with Leroy Arnold, Norris Bloomfield and Richard Neal I left San Diego at 1 p.m. bound for Flagstaff and San Francisco Mt., Arizona, where we were to join Maj. E. A. Goldman sometime between July 15th - 20th. The newly overhauled Ford truck began to heat badly soon after we reached El Cajon and by the time we had reached Viejos Valley it seemed best to return to San Diego for adjustment.

Bob Bass fixed the radiator with a Coca cola bottle top stopping up a hole in the baffle plate in the radiator thus preventing the excessive pumping of water getting out thru the steam exhaust pipe.

We found Imperial County tolerably cool for this season and drove on to Gila Bend, Arizona, without event. Here we spent 3 hours resting and again got under way at 5:30 a.m.

July 15

The morning sun gave promise of a scorching day, so we hurried on as fast as we dared push the old truck. At Gillespie Dam 4 Wood ibis were seen perching on the cement dam and at a point a mile or so above the dam a beautiful pair of Arizona cardinals flew across the road almost being struck by the car. We passed thru Phoenix at 10 a.m. A pair of small boys and a truck load of watermelons by the road side was more than the gang could pass so we stopped and purchased 2 huge melons. A hundred yards up the road we feasted on one of them and it was refreshing after the hot morning. About half way up the steep grade near Cougars Junction, Norris caught a number of insects. The altimeter read 4000'. Lunch at Prescott at 1:30 p.m. then on to Ash Fork. Recent rains had made the region green and cool, decidedly different from the torrid, dry desert we had crossed this morning.

Williams, then Flagstaff at 6:30 where I tried to get in touch with members of the Forest Service but too late in the evening!

We purchased some food for breakfast, had our dinner and drove 6 miles east of the town to spend a very restful night under some huge Yellow pines by the side of the road.

July 16

We were awakened at sunrise by robins in the trees overhead. I saw several Lewis woodpeckers and a pair of flickers while a Meadow lark was seen several times passing by with food for its nestlings.

On a barbed wire fence nearby I found a juvenile Spotted towhee that had been pinned onto the barbs by a shrike. While I didn't see the shrike commit the act, later when preparing the specimen I found cut marks on the back part of the towhee's skull where the shrike's beak had punctured the victim's brain. This was not due to the barbed wire for the towhee had been hung up by the fleshy part of its wing.

At Flagstaff I contacted the Forest Service man and found that Mr. Goldman had not arrived as yet so I left word and we drove out to Little Springs on the north side of San Francisco Mt. where camp was established.

The place had changed some since Mr. Sefton and I had collected here some 9 - 10 years ago. A fox farm had been established in the smaller meadow and but recently moved away.

After getting camp up Leroy and I scouted about for Perognathus trapping ground. I shot a few birds and Norris caught insects. Dick set a bunch of gopher traps. About 3:30 a heavy thunder storm broke drenching the countryside.

Leroy brought in a young porcupine that he captured climbing an aspen.

The three boys strung out their traps through the aspen and fir forest and about the meadow. They had hardly gotten their lines out when a sharp rainstorm passed over, necessitating the resetting of their traps and also getting wet.

During the night I heard a Spotted owl hoo-hooing around camp.

July 17, 1937

The traps held an abundant catch of *Peromyscus maniculatus* Leroy - 26, Norris - 4, Dick - 8. Dick also had 2 gophers.

I found a Chipping sparrow's nest almost in camp. It was situated (5 feet up) in a small pine. I hoped the bird would be tame enough to photograph. I went hunting up the slope south of the spring. In a three hour hike I found 4 pairs of Hermit thrushes with young on the wing, none of which were taken. A pair of Sharp-shinned hawks had their nest in a tall fir tree and kept yelling as long as I was in the vicinity tho never getting within gun range. A defective shell blew an immature Virginia warbler beyond saving. The highlight of the hunt was the capture of an immature Red-faced warbler which so far as I know is the first record for this region.

I saw 2 pair of Black-fronted Audubon warblers with young on the wing.

About 4 this afternoon Le Roy, Norris and I drove over to Hart Prairie and set out 65 traps each. Our lines were kept along a slowly running stream among the willows and along a rail fence where lush meadow growth was present.

While setting my last few traps I flushed a pair of Green-tailed towhees from a dense thicket of willow - gooseberry and annual growth. They were much concerned over my presence and were evidently nesting. Their occurrence constitutes another record for this locality.

On our way back to camp a lone Clark's nutcracker was seen near the summit ranch.

Bats were flying about camp as we were having our evening meal and 2 were collected.

July 18, 1937

Our traps held an abundance of *Peromyscus maniculatus* and 9 *Microtus* (4 long-tailed and 5 short-tailed). The 2 most desired species for which we were trapping were not taken viz. *Sorex zapus*.

I made some pictures of a Golden-mantled chipmunk this morning. Saw 7 crossbills fly over camp.

Went hunting through the aspens east of camp, found several pairs of juncos feeding young. Saw a male Western tanager and 2 pairs of Black-fronted Audubon warblers, the latter feeding young on the wing.

A dozen cars full of people picnickers at the spring today and a ball game threatened our camp.

After the crowd had left we went down to the spring and 2 warblers were seen nearby chasing a Golden-mantled squirrel. Le Roy flushed a Mourning dove from her nest on a horizontal limb of a willowtree in the creek bed. The nest was too high for photography. It held 2 half incubated eggs.

We set our traps over the same ground in Hart Prairie where we had set in yesterday.

July 19

The traps held another large catch of *Peromyscus maniculatus* and 9 *Microtus* (7 short-tailed and 2 long-tailed).

Le Roy found a Broad-tailed hummer's nest. The nest was of plant fiber adorned with lichens and saddled on a dead willow limb about 3 ft above the ground in the creek bottom. the bird seemed so tame that I resolved to return and attempt some photographs.

I saw 4 Western crows below camp and a long shot failed to kill.

The hummer proved to be a wonderful subject and allowed me to set a camera within 3 ft of the nest. Several observations were noteworthy. There were at least 10 mated pairs of Broad-tails in 300 yards of willow-lined creek and these pairs were stationed within a radius of 100 feet from the nest. On two occasions birds from the two pairs visited the incubating bird. One she left the nest and chased, the other did a mid-air feeding act. So quickly did the latter act happen that I could not determine for certain whether it was a male or female. At any rate it was perfectly agreeable to the incubating bird for she neither fought nor left the nest.

Unfortunately I had just pulled the string and lost a chance for a wonderful picture. I did have a chance on the first visitor and hope for a good picture.

Norris and I set our mouse trap line through the willows near the rill in hopes of getting some diurnal *Microtus* and possibly some shrews after the horde of *Peromyscus* are caught off.

In the afternoon near camp a family of *Dryobates pubescens* came in. Norris killed an immature female and later I killed an adult female & 2 juv. males. He also shot an adult female Evening grosbeak. Saw a Sharp-shinned hawk fly past at sundown, also a Clark nutcracker. Leroy set his line through aspens and along the damper parts of the meadow near the spring. We plan to leave this line out for the next few days in hopes of getting shrews.

Just at dusk a Spotted owl started calling from a dense aspen forest very near camp. I set out in pursuit but never got within gun range. As has been often expressed, the call resembled a hound baying and was repeated again and again and almost the same two syllables dog-voiced call - very easily imitated.

While I was away chasing this owl the boys heard a <sup>was</sup> commotion in an aspen tree near camp. A pair of robins had their nest in the upper branches of this tree and the old birds began making a vociferous protest. They took a flashlight and were not long finding that an owl had found the robins and was intent on securing one for his dinner or perhaps one should say breakfast. At any rate the light frightened it away and the owl was plainly seen as it flew across the open in the bright moon light.

Later about 9 p.m. the owl began calling near camp again so Norris donned the hunting lamp and tried his luck but no good after half an hours chase.

July 20, 1937

Our lines in Hart Prairie held a couple of dozen *Peromyscus* and two long-tailed *Microtus*. Very disappointing as I had hopes of a shrew.

Leroy's line near camp held a large number of *Peromyscus maniculatus* and two long-tailed *Microtus*. Later he visited his line (4 a.m.) and found 2 more *Microtus* had been caught.

Today is the day we are expecting Mr. Goldman and his party. If they do show up we may pull stakes for new localities on the morrow.

The Chipping sparrow near camp is still very shy. Though I have the nest well trimmed out for photographing.

The 12 trap lines at Hart Prairie were left out.

July 21st

Norris and I went to Hart Prairie soon after breakfast this morning. The trap lines held 2 Green-tailed towhees & a dozen or more *Peromyscus*. I made pictures of the hummer and found her tamer as usual tho nothing unusual happened today so guess the visits by other hummers were for nothing.

We arrived in camp about noon and Norris shot a few birds near camp.

This evening the boys set their traps about camp tho the results seemed a bit doubtful.

After supper the Spotted owl was again heard and Norris donned the hunting lamp and started after it. It wasn't long until a gun shot was followed by hoopla and shouts as he proclaimed the kill. The owl was perched on the dead top of a tule fir tree & was brought down with a broken wing. The reflecting lamp was not used as the owl was plainly seen against the sky.

July 22nd

As was expected the traps held very little except a horde of *Peromyscus maniculatus*.

I made pictures of the Chipping sparrow and a very tame House wren this morning while Norris picked up a few good birds near camp.

About noon the great thunder clouds that loomed over the peak each day decided to precipitate and heavy showers commenced to fall.

In the midst of the downpour an automobile horn sounded in camp announcing the arrival of Maj. E. A. Goldman & his son. They had driven in from Winslow this morning and after their lunch and establishing themselves for the night in Flagstaff came out to find us.

We laid plans for an early start in the morning for the Mt. Trumbull region.

July 23, 1937

We were all active before day break this morning breaking camp and arriving in Flagstaff at 9 a.m. We bought a few supplies and chatted with our newly met friends.

The party consisted of Mr. E. A. Goldman and his son Luther, working for the U.S. Biological Survey, and Mr. Nichols, working on a survey of Mt. sheep of Arizona, a combination project sponsored by the National Audubon Society, Arizona Fish & Game Commission & the University of Arizona. Nichols had a swell outfit bought and equipped especially for his purpose - a wee bit too swanky it struck me. It consisted of a Reo 3/4 ton delivery truck with specially built body, radio, generator for lights, kitchen cabinet and double spring bed, on top of the car spot lights, in fact every comfort of a modern home.

Our truck being the slower it was decided that we would shove along so we parted to meet this evening at Jacob's Pool. We wrote cards and letters for 15 minutes, bought some groceries, had our lunch and left Flagstaff about noon.

We had not gone far before it was apparent that the Ford was not working right. In fact, it had never been up to its best since leaving San Diego.

The day was warm and the car heated badly so when we were about 15 miles out it was decided that we had better turn back for repairs. So back we went and to the Ford agency where to my chagrin and amazement they refused to do anything for us.

We then turned to a general garage where it was found the car was out of tune. We got fixed up and in an hour were on our way again this time with a better performing motor.

Our route lay through the Painted Desert via Cameron to the Grand Canyon bridge.

A hot downhill run with little to see except an occasional bit of low scattered herbage where possibly a few mice might exist.

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Sunset found us climbing from Hunsrock Valley up the steep grade towards Jacobs Pool on the summit of the Kaibab Plateau. Arriving about 4 p.m. we found our friends had preceeded us and were comfortably situated in a cabin. We drove on a mile or so and camped for the night near the road under some small Yellow pines.

July 24, 1937

It sprinkled rain during the night and morning found Norris curled up on the seat of the truck - most uncomfortable from my point of view.

We packed and left as early as we could get away and were well down into the valley north of the Kaibab before the other two cars caught up.

I found a rattlesnake killed by automobile on the road, 12 miles south of Fredonia.

We shifted our passengers so that we might all become better acquainted. Major Goldman rode with me and we had a delightful time conversing on general topics, even politics!

We arrived at the eastern entrance of Zion Nat. Park and were issued complimentary car passes. The other two cars were found awaiting one slow arrival at the large window in the long Zion tunnel. At headquarters in the park we visited the museum and chatted with the rangers for half an hour.

The day was exceptionally warm and our route led down into warmer country.

After an uneventful run we arrived in St. George about 1 p.m. and found the place closed up. They were celebrating a Mormon holiday - Pioneer Day. That upset our plans as we wanted to purchase supplies and Nichols expected mail. After some debate we decided to move up into the hills towards Wolf Hole where we would establish camp and return to town Monday for mail and supplies.

We made camp 4 miles north of Wolf Hole in the juniper belt at an altitude of 5400.

Traps were set out through the sage and juniper association. Birds were not common but Western night hawks were heard zooming over camp at sundown and later poorwills were heard. Norris collected one by flashlight.

July 25

The traps had a fine catch of which Arnold's notes carry details.



I put up a few birds including a vireo of which several were heard singing in the junipers nearby.

In the afternoon I accompanied the Goldmans in their car to a point down the grade to set for *Dipodomys microps* subsp. This locality was below the sage and juniper belt in a dry sparsely brush-covered area. These Kangaroo rats built large dirt mounds and these mounds are apparently occupied by but one animal.

The two Goldmans set their small Schuylers about these mounds while I tried my old straight line. We made sets in three places in about 1 mile of road.

This locality is about 24 miles south of St. George and given by us as 6 m.n. Wolf Hole.

The boys set up 2 lines at camp in sage and juniper.

July 26th 1937

My traps held very little and only 1 half-grown Dipo. while the Goldman sets caught 8-10 fine Dipos. This proved to me that it is necessary to set in the colonies for this species and that their small Schuylers are at times more effective than the wooden traps.

At camp the boys had a small catch which included 2 *Perognathus parvus*.

After lunch Nichols and Luther Goldman drove down back to St. George for mail and supplies. They returned too late to move so we decided to spend another night in this camp.

Heavy clouds foretold rain which did fall after sundown.

Trap lines were set again through the sage - juniper association.

July 27th

Dawn found camp astir with activity, packing up to move. The trap lines held little worthwhile. The saveable material was viscerated and packed.

Our route led us through the junipers and over the ridge where we found Wolf Hole to be a dwelling & several large barns occupied by an Irish woman and her daughter.

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The tree belt ended here and the road led out onto vast flats of sage and grassland.

The radiator developed a very bad leak soon after leaving Wolf Hole and we put in two boxes of radiator solder with no good results. We soon had all the water in the party poured into the radiator but managed to reach a ranch home called "Little Tank" where we replenished our supply.

Near here I saw a pair of Mocking birds and several Sage thrashers. After leaving this place our route led southward over open country. Some brushland was crossed and numbers of Western lark sparrows were seen perched on the fences as we passed.

In a small corral near a farm home I saw 3 Nevada cowbirds but could not shoot them.

A half dozen houses and a school was all that formed the town of Mt. Trumbull. Directions were sought from the people and after much inquiry we set out on the last 11 miles of our journey to Nixon Spring. Our route led up a canyon towards the top of Hurricane Ridge. We had been paralleling this escarpment for about 20 miles and were now turning towards its summit. Pinyon, juniper and smallish Black oaks were the predominant trees. A steep rough road soon had the truck boiling and the other two cars waiting for us. To top it all, the back doors came open and our trap sacks, cots and big canvas fell out. Luckily they were missed before we had gone a mile but this return delayed us and again our friends waited for us. By this time I could see plainly that they did not like the delay. And this was later manifested when Mr. Goldman suggested that we stay at the Spring while they radiated about using Nixon Spring as a hub of their exploration.

This suited me as I am already a bit tired of hurry-scurry collecting. Lots of travel and no specimens is not my type of work.

We arrived at Nixon Spring about 1 p.m., tired but encouraged with the appearance of good transition zone, Yellow pine - juniper collecting ground and plenty of cool water.

A couple of old abandoned shacks, a corral and an acre or two of cultivated ground with a fair stream of water piped into it formed the human side of the picture while a fairly dense forest of Yellow pine mixed with pinyon and juniper formed the forests that clothed the mountains that rose on the north-east and south-western sides of this wide valley.

Sage brush parks were scattered through the forests and 2 of fairly large extent looked like very fine trapping ground.

Threatening clouds gave promise of rain so after a hasty lunch we set up camp in the junipers. A Golden eagle was seen flying over the valley just before the storm broke this afternoon.

Our friends said a hasty farewell and left for Toroweap Valley seemingly glad to get rid of us.

We had a couple of hard showers at 4 o'clock but by good luck they were passed by sundown and the boys got out the traps.

July 28, 1937

After breakfast I went hunting east of camp. Arnold is taking over the mammal collecting & notes so I will be free to work with birds.

Saw several Band-tailed pigeons, Spotted towhees, Violet-green swallows, martins, White-naped nuthatches, R.S. flickers, Blue-fronted jays, Woodhouse jay, Slender-billed nuthatch.

At sundown hundreds of doves came in to the spring to drink and a lone female Duck hawk flew in in search of a dove.

July 29

Had two good shots at the Duck hawk this morning but missed. Saw 3 Pine siskins near the field and found W. chipping sparrows abundant. However, by far the most common bird here is Mourning dove. There are hundreds in for water morning and evening.

Arnold reported finding a Sage hen in the juniper - sage belt west of camp. He said the bird ran out from under a juniper on a ridge and he was within 20 ft. of it.

Heard Horned owls hooting last night.

July 30

Last evening two ravens were seen flying over the fields and this morning 47 were counted as they flew from a night roost in some tall pines on the edge of the field. They all flocked up and were last seen flying eastward through a pass towards Toroweap Valley - evidently a passing flock that had spent the night on the pine trees.

Today I hunted towards the south and found a large lava field of perhaps 400 acres in extent.

Rock squirrels were abundant about the edge of this lava and when they sought refuge in its rugged confines the squirrels' light color made them very conspicuous.

when leaving the lava field I flushed and collected a Horned owl. The bird was perched in a lower branch of a Yellow pine and was being scolded by a small flock of White-naped nuthatches and several Rock squirrels.

A couple of old saw mill sites were passed and I sat down to write notes under a large pine in a canyon. Blue-fronted jays were heard and two were collected. On my way back to camp I shot 2 Spotted towhees in a sage park amidst the pines.

About sundown Nichols and the Goldmans came in on the way back from Toroweap. Nick was very sick and Mr. Goldman was badly worried about his condition. We spent the evening talking.

July 31st, 1937

The Goldmans and Nichols left after breakfast bound for a physician in St. George where Nick hopes to get some relief from his ailment.

I didn't leave camp today as I had a lot of skins to put up from my hunt yesterday. The Goldmans expect to return Monday and bring in some groceries.

August 1st

I hunted west of camp today hoping to get a crack at Leroy's Sage hen - no luck. However, I did find a Grace's warbler feeding a young on the wing & collected both of them. They were feeding in the Yellow pine on the edge of a sage park.

White-throated swifts were flying about camp abundantly this afternoon in company with a host of Violet-green swallows.

Heard Pinyon jays nearby today. In fact they have been heard several times but so far never seen.

A Coopers hawk dashed through camp this morning as I was preparing breakfast. It must be also prying on the doves. A pair of Sparrow hawks live in a pine tree that stands in the middle of the field and are to be seen anytime during the day in this area. Saw a Red-tailed hawk over camp today.

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A party of Nichols' friends came last night and camped nearby.

August 2, 1937

I tried the Sage hen country again today but instead of going down over the sage flats I went up the mountain from where Leroy had flushed the bird. I found a heavy chaparral. Jays, chipmunks, several Black-headed grosbeaks, bluebirds, flickers, in fact every bird that will eat fruit was there. I shot a Virginia warbler from a berry bush where it was eating fruit. This slope of the mountain was clothed with dense thickets of Black oak and manzanita interspersed with large Yellow pines, some scattered thickets of locust was also found.

Several days ago the boys climbed the mountain back of camp, Mt. Trumbull and found a few aspen near the spring which is the source of our water supply.

As I was leaving camp this morning I shot a beautiful pair of crossbills from a pinyon near the corral. They had come in for water. Dissection proved them to be breeding, a fully formed egg (soft shelled) was in the oviduct of the female.

Evening found the Goldmans not in so guess that Nichols was bad off and they had to change their plans for returning. Nick's friends left for Toroweap Valley this morning to stay overnight, will return tomorrow when they hope to meet up with him.

August 3

Was awakened during the night by an automobile driving in, who I could not say but before returning to sleep a Screech owl was heard several times on the hillside nearby.

Went for a short hunt this morning and shot a most decrepit crossbill near the corral. Evidently they have no particular season in which to molt for this bird is in the ratty plumage while the two yesterday had only the first primary in each wing being replaced.

If Mr. Goldman doesn't come in today we will have to go down tomorrow and our trip will probably terminate. Mr. Goldman came in as we were having our supper. He had been with Nichols down to Parashant Mt. and left Nick at Wolf Hole. The friends of Nick came in this evening and we all went down to the camp for the evening.

August 4, 1937

Hunted an hour or so this morning but found nothing of importance so returned to camp and put in my time trying to fix the radiator and packing specimens.

White-throated swifts were abundant about camp today. Norris killed one with the 22 using dust shot. I got a young tanager.

August 5

We packed up today and left about noon. We had little or no trouble until we reached .....

pages of notebook missing

August 10, 1937

Flat open ground - scattered brush. One rocky gully.

Arnold -    4 *Dipodomys merriami*  
             2 *Perognathus formosus*  
             2 *Neotoma intermedia*  
             1 *Perognathus longimembris*

Neil:        1 *Dipodomys merriami*

Bloomfield - 1 *Neotoma intermedia*  
              1 *Dipodomys merriami*  
              2 *Perognathus formosus*  
              2 *Perognathus longimembris*.

Many small bats flying this evening - started just at sunset. 2 specimens shot were both *Pipistrellis*. Arnold left for coast this morning.

August 11

Traps were again set on open ground as of last night.

Neil caught 3 *Dipo. merriami*, male, and 2 *Perognathus longimembris*, female.

Bloomfield - 1 *Perognathus longimembris*, 3 *Dipo. merriami* (1 male, 2 female), 1 *Dipo. microps*, this latter a rather unexpected catch.

The boys looked at my muskrat traps about 10 a.m. and found another specimen. This makes 4 of this interesting species.

The day was excessively hot, 107° in town and a light north wind was blowing at sunset, coming down from the northern desert region. The bats were not as abundant as usual, probably moved southward. 2 collected were both *Pipistrellis*.

This evening Neil set his traps in the brushy lowland in which the boys have been trapping and Norris set his on the mesa on lava-creosote ground.

August 12, 1937

Night very hot & mosquitos desperately hungry so all of us feel a bit fagged this morning.

Neil's line held 2 *Dipodomys microps*, 3 *Perognathus longimembris* and 1 *Perognathus formosus*.

Norris' line held 5 *Perognathus formosus*, 4 *Perognathus longimembris* and 3 *Peromyscus crinitus*.

We still lack *Microtus* from this locality and have but one or two *Onychomys* - both much needed to round out the collection.

Norris made 3 gopher sets in a truck garden on the beach south of the river and at sundown we found two nice adult specimens had been taken. All the rest of the gophers have been taken on the north side of the river tho I don't anticipate a difference for this stream is so irregular in its flow that gophers might well get from one side to the other.

Neil set his traps well up north of camp on the flat brushy sandy ground.

Norris set his line along a weed-grown fence that separated two alfalfa fields. We are hoping for *Microtis* but are not too enthusiastic over the prospects.

August 13

The trap line set along the weedy fence row between the alfalfa fields held 8 more mice and that was all!

Neil's line held 6 *Perognathus longimembris*, 3 *Dipodomys merriami* and 1 *Dipodomys microps*.

Very poor catches all and it looks as if we were doomed to defeat on microtus. These desert microtus are surely rare and little wonder for their range is definitely bound to the riparian strips and where flood or drought occur they face complete extermination.

The muskrat sets held another specimen, making six in all. These traps were left set and seem to be catching one specimen each day.

The car had been acting badly so back to the garage this morning to have it fixed.

While in town Luther and Mr. Goldman found me. They had been down to Beaver Dam, Arizona, and found the weather very warm (117° in the shade).

They found signs of muskrat in the river but did not trap. They plan to leave for Zion tomorrow and we will go with them.

Today being Friday the 13th the weather took a fling at us. About 4:30 this afternoon the clouds that had been gathering over the distant mountains on their sides of us began to precipitate with a great bang-up of lightning. We did not get rain but the blast of wind and dust was so violent that our trap lines were not set. Luther Goldman came by and together we went down to the river and set the jump traps in the tule for muskrats.

August 14

My muskrat traps held another specimen, this time a young female. This species seems to be a much darker brown than any taken so far. Luther also caught one, which was all he wanted.

We packed up and again went into town to have the Ford checked up. Surely there must be an end to our Ford troubles so there is hoping.

We met the Goldmans at the Camp Washington tourist camp and drove on to Zion. Mr. Goldman rode with me and we enjoyed another festival of conversation.

We arrived at Zion about noon and found that permits had been issued for us to collect in the park.

We camped in the public camp ground and after lunch the boys went out with the gopher traps. Mr. G. and Luther drove out in their car while I put up the muskrat and gopher brought



up from St. George. They set a number of gopher traps along the valley floor in the same general locality that Dick and Norris set theirs, all about 4400. Sandy alluvial amid cottonwood, box elder and willows.

One hour later Goldmans had 2 gophers. They then drove down to the east entrance of the park where they made a number of gopher sets. This is probably a mesa & high country variety, different from the valley floor.

Norris and Dick caught 1 gopher and 1 *Peromyscus maniculatus*. The latter was under a rotten log.

In the evening they caught a medium-sized rattlesnake on the road near camp.

Sat up until midnight chatting with Mr. Goldman.

August 15, 1937

This morning 10 gopher sets held but single immature. I took 8 traps and accompanied Mr. Goldman and Luther to the summit near the east entrance of the park. Gopher sign was abundant and I had little trouble making 6 sets with my 8 traps. *Dipodomys* sign was abundant, probably some of the *ordii* group.

At noon the boys took another gopher from the traps.

Looked at traps by lantern light 10 p.m. Norris' line held 1 *Peromyscus truei*. No other activity.

August 17

Traps held good catch this morning. Norris' line held 2 *Dipo. ordii*, 2 *Onychomys leucogaster*, 1 more *Pero. truei*, 2 *Pero. maniculatus*. My line held 7 *Dipo. ordii*, 2 *Perom. truei* and 2 *Peromyscus maniculatus*. Gopher traps empty.

August 18

Near summit Encopah Mts, 1 mile west of Summit Service Station, altimeter read 4850. Tree yucca, agave, low scrubby brush, sandy soil, some rocks, gravelly. Norris caught 1 *Dipo. microps*, 1 *Dipo. merriami*, 2 *Onychomys torridus*, 1 *Neotoma lepida desertorum* and 6 *Perognathus longimembris*.

Huey and Neil - 6 *Perognathus longimembris*.

February 17 - February 27, 1938

Chemehuevis Mts., Arizona

April 18 - May 12, 1938

Second trip to Chemehuevis Mts., also to  
Hualapai Mts., Arizona

Huey with Bill Kennee and Phil Lichty

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February 17, 1938

With Bill Kennee and Phil Lichty as companions I left San Diego in the AA truck bound for the Chemehuevis Mountains in south western Mohave County, Arizona.

We said adieu at 5 p.m. and stopped for the night on the desert a mile or so north of Pilot Knob. My plan was to spend a couple of days around Bard checking up on the mid-February bird life, then north on the Arizona side of the Colorado River to Parker, cross into California again and back into Arizona over the Parker Dam.

A cold wind was blowing from the north when we settled into our beds and it was still cold when the sun rose.

February 18

A hasty breakfast and packing again warmed us as we set forth towards our day's work about Bard.

As we pulled onto the main highway two large flocks of Mountain plover were seen flying over the Malapar Flats south of the highway. A sharp survey of the region revealed another flock swerving over the flat ground about 300 yards away. The first two flocks circled this flock then made off over the sand dunes towards the west. Two shots secured 3 specimens and further pursuit would have resulted in more specimens but this number seemed sufficient to mark the species as a new bird to my Bard list. These birds seemed very stupid and were not at all shy. They reminded me of killdeer and are, of course, closely related.

Later when I skinned the plover the gizzards were examined and found to contain only a small portion of coarse sand. The testes on the male were enlarged to about 6 mm in length showing the breeding season to be fast approaching.

Turning north off the main highway we drove out to the mouth of Picacho Wash. Many meadowlarks in the fields. One Vermilion flycatcher was seen perched atop of a dead weed stem in a field. Gambel sparrows were abundant, 2 Turkey vultures seen circling. 1 Say phoebe, 1 Crissal thrasher shot in desert wash. Numbers of Tree swallows flying in small scattered flocks over the valley. 1 Sharp-shinned hawk over willows. WE drove up the main canal bank from Picacho Wash to the Experimental farm. Many Gambel sparrows, 1 Marsh hawk, several Audubon warblers. 1 pair of W. Red-tailed hawks. several Says phoebes, 1 Black phoebe, Cactus wrens abundant, singing everywhere. Verdins common. Mourning doves, many paired off. Several roadrunners & heard others calling their peculiar

cuckoo-like nuptial call. Mockingbirds seemed more abundant than I had ever seen them in former years. Phainopeplas were common and as usual each bird seemed to be standing guard over his own individual bunch of mistletoe berries. Several small bunches of Brewers sparrows were seen in their usual niche of desert brush association near the canal and a few Sage sparrows were also found in this quail brush (atroplex) cover. 1 Desert wren. A few pairs of Ground doves were found along the canal bank, especially where there was some dead cottonwood limbs and arrowweed thickets. Aberts towhees were about as abundant as usual as were Plumbeous and Western gnatcatchers. I saw 1 Ruby-crowned kinglet in the mesquites. After leaving the canal bank at the experimental farm we drove up to the All American Canal Dam, passing the old favorite hunting ground. What a forlorn picture it presented - fire and human occupation had devastated the old haunt until scarcely any of the old landmarks were left. Black fire-charred stumps marked the large old cottonwood trees that once bordered a tule pond. The tule pond had been burned off and the water drained so nothing to attract birds was left. So desolate did it appear that we did not venture inside the newly strung 4 wire fence. No hunting signs were nailed along at intervals. This seemed but a ghastly reminder of the times now past when great flocks of ducks, egrets and Harris hawks were to be found in the area.

Returning I saw an osprey flying over Laguna Dam, another bird for the list! 2 Blue herons but no White pelicans! They too have probably been exterminated from this region.

Passing along the canal I had a rather rapid view of several sections of the valley and a few points of interest presented themselves: on abandoned ground that had been cleared but not levelled quail brush and alkali weed quickly returned and within a few years the cover was back almost to its original density. Only the large mesquites were missing and these in most cases must be very old for seldom did I find even seedling shoots starting up. However, on ground that had been leveled then abandoned, either Bermuda grass or arrowweed grew up very rapidly interspersed with a scattered growth of screw bean mesquite. In some places where the Bermuda grass was harvested for its seed no mesquite was found growing though in the case of pasturage it grew freely. The arrowweed-Bermuda grass competition depended entirely on the subirrigation. A high water table was more suitable for Bermuda grass and in some cases when drainage from other fields overflowed the ground Bermuda grass seemed to flourish. With this second growth of mesquite the Cactus wrens and verdins seemed to increase. This scattered growth of thorny trees being very much to their liking. I also saw several Crissal thrashers' nests nestled in the lower parts of the

screwbean mesquites. It seems rather odd that a bird that is as shy as this thrasher should chose such open sites for their nests. This is probably due to their shyness and gives the incubating bird an opportunity to escape before an enemy approaches.

We camped for the night near the Picacho Bridge. During the night I heard a Screech owl chickering nearby.

February 19, 1938

While preparing breakfast I saw a large Hummingbird fly to the top of a bush nearby. It looked very much like an Anna. Later I had a shot at it but missed. This time I was certain of the identity. The bird was feeding on the trumpet-shaped flowers of the exotic tobacco that had found its way to this region during the past 10 years. This plant is a favorite host of the Anna hummer on the coast. Saw 2 Red-shafted flickers but for the last 10 years I have not seen a Mearns flicker. The removal of the greater part of the large old cottonwoods has evidently deprived this species of its habitat and they no longer are to be found in the region. Shot at a Lutescent warbler but did not kill it. Saw a pair of Cactus woodpeckers.

I walked down the canal towards the Power Plant and searched an area of primeval ground for birds. Cactus wrens and verdins were abundant. A small covey of quail was found a mere stragglng remnant of the horde that occupied this area in 1916 when I first knew it. This no doubt is due to the illicit hunting that goes on regularly for later on in the late afternoon and evening no less than three hunting parties were banging away with small caliber guns in this small area, all out-of-season hunters.

Along this unused road that ran through the mesquites I found a number of 22 shot shells and over a dozen 410 casings, all fairly new. This clearly demonstrated the amount of shooting that goes on. Little wonder that game is scarce. Later in the afternoon a large flight of Rough-winged swallows were seen passing up the main canal and during the day the stragglng lot of Tree swallows were observed as they had been yesterday. A Crissal thrasher was seen sitting on top of a bush singing this morning, evidently the beginning of his nesting season. A pair of Gila woodpeckers were seen in a willow tree near the road, and several pairs of Ground doves were noted during the day.

One noticeable fact during the two days spent in the region was the dearth of Song sparrows. Not a single melospiza did I find and I was looking in all the thickets along the

canals for them. Do they migrate or have the cowbirds done their dirty work and cleaned them out?

We spent the night again near the Picacho Bridge. This night I heard a Horned owl hooting nearby and at dusk heard and saw a Black-crowned night heron flying over the canal.

February 20, 1938

We broke camp this morning preparatory to continuing our journey. As we were leaving the valley a large flock 40-50 Turkey vultures were seen circling up from their roost in a grove of cottonwoods near the river. Saw a shrike or two as we drove past the fields.

We refilled the gas tank, purchased some grapefruit at the packing house and left about 10 a.m. bound for Parker nearly 200 miles up the river. The roads, though graded, were very rough and at times I thought the car would be shaken to pieces.

About half way between Dover and Quartzsite I saw a sign marking a palm canyon. This might make a good place to explore later on with Gander.

Our route led to Quartzsite then to Barse and onto Parker where we crossed the river into California again. Driving north along a paved road we again crossed into Arizona over the Coffey Dam above the half finished Parker Dam and spent the night ~~the night~~ near a large gravel pit just across the Bill Williams River.

February 21

Up at crack of dawn this morning and made ready for the last leg of our journey before making our first camp in the Chemehuevis Mountains.

Our route led off into the river bottom soon after the Bill Williams river bridge was crossed and 100 yards of sand brought up against what appeared to be a terrible bog hole. Scattered pry poles bore mute evidence of other travelers having had trouble at this spot so we stopped and sized the situation up. We crossed without difficulty. The winding rough road led up the valley and great flocks of phainopepla<sup>3</sup> were seen. Never before did I ever see such a congregation of these birds. There must have been 3-4 hundred in a flock. Noted many varmint tracks in the dusty road and saw many Western bluebirds. After 10-12 miles the route turned up a wash and thence over a rolling desert mesa. One route lay north-east and the Chemehuevis range stood boldly

in the skyline. A bleak and barren desert range of mountains, though not as steep nor as rocky as these of the Yuma region.

Again the road led into a wide sandy wash and this was followed for several miles. The altimeter showed a general increase in elevation, from about 450' at the river where we left our night's camp.

The first sign of human occupation came when we found a branching road that led into a narrower canyon. A marker indicated "Gold Spring 1 mile" and a short distance beyond was a small sign with a directing arrow marked "water". This well marked route led into a canyon that narrowed as we ascended and shortly brought us into a prospector's camp. A lone, elderly man named Griffith came out to greet us and bade us welcome in true desert style. His partner was away to the coast and he was glad to have company. The place was neat and orderly and he soon made us feel at home.

After a short conversation we scouted about to get the lay of the land and decided that the place was well worth a week's stay. The surrounding hills were fairly well covered with desert shrubs, Palo Verde - ocotillo - Desert holly and a few cholla cactus formed the greater part of this vegetation. There were no mesquites, apparently not enough water for them. Woodrat sign was plentiful as was that of *Perognathus* over the Malapair flats though I saw no gopher work. Several *Ammospermophilus harrisi* were seen scampering over the rocks. Mr. Griffith told us that Gila monsters were to be found here along with 2 species of rattlesnakes, chuckawallas etc. A small bunch of about 35 Desert quail lived about the place and were being fed by him. We promised not to kill them. A few Gambel sparrows, 1 Desert sparrow and a Rock wren were the only species of birds I noted on a walk this afternoon although I did see many verdins' nests in the Palo Verdes.

Phil and Bill set trap lines over the Molapair above the canyon north of camp this evening. 8 prune-baited traps were set in rat nests along the canyon wall.

February 22, 1938

The traps set for rats amongst the rocks in the canyon held four woodrats of two species - *Neotoma albigula* 1 - and *Neotoma lepida* 3. The 2 lines of mouse traps numbering over 85 traps held absolutely nothing. I can hardly understand this, for the ground looked to be inhabited when I walked over it. However, they just didn't get in the traps so will try again.

After lunch I again went down to canyon hunting. A few yards from camp I saw 1 verdin, 1 Desert sparrow and half a dozen Gambel sparrows. These proved to be the only birds seen in a two hours walk. About 4 p.m. when returning to camp I shot a small Myotis, probably yumanensis in the canyon nearby. It was flying about the face of a small cliff in the bright sunlight and seemed to be feeding.

A lone shrike flew past camp this evening but did not stop.

The boys set the third line of mouse traps and 4 more rat traps this evening. The rat traps were set in cactus filled nests amongst the rocks in the canyon while the mouse traps were placed both along the washes and over malapair flats.

February 23, 1938

The mouse traps held 3 Canyon mice this morning, not a great average for 150 traps, while the rat traps (12) caught 6 Neotoma - 3 lepida and 3 albigula.

The whole covey of quail came in this morning to feed and are very interesting to watch. They are quite pugnacious and jump at each other when feeding like little game cocks. Mr. Griffith puts out ground corn, pieces of dried bread and peelings of boiled potatoes. One bird will seize a piece of dried food in its beak and run away exactly like an old hen in a flock of chickens.

This evening Phil set a line of mouse traps down the canyon from camp. While Bill reset the two lines up the canyon and out on the malapair flats. 16 rat traps were set in the rocks and pot holes along the canyon wall.

February 24

The traps held an abundant catch this morning. Phil's line held 3 Perognathus intermedius, 3 Peromyscus crinitus and 2 Neotoma lepida, while Bill's line held 7 Neotoma lepida, 2 Neotoma albigula, 2 Peromyscus crinitus and 3 Perognathus intermedius.

A pair of Plumbeous gnatcatchers were seen in the bushes near camp this morning. I located the quail and set up a tripod this morning in hopes of pictures later when the light is right, but didn't have time to make pictures when the afternoon light came.

The boys rebaited their lines again this evening. As we were eating supper just at dusk a poorwill skimmed over our heads and alighted a rod or so from us in the creek bed. I shot at it but it sprung into the air just as I shot so didn't make the kill.



February 25, 1938

The catch was not heavy this morning. Phil's line held 3 *Neotoma lepida* and 1 *Peromyscus crinitus*, while Bill caught 1 *Neotoma albigula*, 1 *Perognathus intermedia* and 2 *Peromyscus crinitus*.

A couple of pairs of Desert sparrows and a half dozen Gambel sparrows played about camp this morning. Birds are very scarce about this place due no doubt to the lack of water and mesquite brush. Palo Verde seems very unattractive to bird life. This is probably because there are hardly any insects that feed on its meager leaves. While mesquites are hosts to many small caterpillars hence offer food for bird life.

A pair of Red-tailed hawks were seen high in the air today.

The quail came in to feed today and I made several pictures of them with the 16" and 18" protar single elements.

At sunset the boys reset their lines and I put out a steel set west of camp.

Phil shot 2 bats, 1 a *Myotis yumanensis* was flying about in broad daylight and the other a *Pipistrellis* was shot later.

during the last few moments of light the poorwill came back into the creek bed and this time I killed it. It proved to be a *P. nuttallii*. As we were eating our dinner after dark 6 Canada geese flew over rather low. We heard them honking before they came into view and could make out their forms distinctly in the starlit sky as they passed. A random shot failed to score.

February 26

My steel set held a Gray fox. Phil had a spotted skunk in a Schuyler and a potent catch it proved to be. He was waiting in camp for me when I returned from my steel set and I smelled skunk the moment I sniffed the air of the canyon when I reached the rim. We secured a long stick and managed to squeeze the life out of the animal without getting in direct line of its scent but in spite of our precautions we both were a bit smelly.

The mouse trap line down the canyon which Phil was running held 2 *Perognathus intermedius*, 1 *Peromyscus crinitus* and 2 *Neotoma lepida*, while Bill's sets on the mesa held 1 *Perognathus intermedius*, 2 *Peromyscus crinitus* and 1 *Ammospermophilus harrisi*.

The day was gray and overcast with promise of rain momentarily. However, it did not come and in the late afternoon we all reset our traps. I moved the steel sets farther down the wash. At dusk I shot a *Pipistrellis* as it flew about camp. Phil brought in a Gambel sparrow that was the victim of a mouse trap.

February 27, 1938

A light rain fell nearly all night. It caused no runoff but soaked the country and ruined the prospects of a good catch.

The steel traps were untouched and the other lines held - Phil's down-canyon sets: 1 *Peromyscus* and Bill's mesa sets: 1 *Neotoma lipida* and two *Peromyscus*.

I shot a Costa hummer and an Audubon warbler near camp. The day cold and overcast.

After breakfast I hunted south of camp over rocky hills and canyons. Spent two hours and saw not one living thing. This region is almost bare of bird life but I don't see what they could find to live on anyway.

February 28 to March 5

We moved camp to Sacramento Valley where we were bogged down for the 4 days' stay then about noon of March 4 left for home. At Needles we found out that terrific rains on the coast had blocked most of the highways so we drove home via Mecca - El Centro, arrived in San Diego 3:30 a.m. March 5th.

April 18, 1938

With Philip Lichty and Bill Pennee I left San Diego in the truck bound for the Chemehuevis region again to continue the work interrupted by rain in March.

The day was light and clear and by the time we reached the desert was a bit warm for comfort.

We reached Needles at 8 p.m., had dinner in the Chuck Restaurant and spent the night on the desert near the Colorado River bridge.

April 19

Out bright and early and on our way. Saw a great colony of Cliff swallows flying about a rocky cliff near the Colorado River bridge.

The ocotillo were in full bloom on the desert in the Sacramento Valley due to the rain two months ago. Scotts

orioles were seen as we traveled along. Near the roadside in the middle of Sacramento Valley and about 12 miles south of Yucca a fresh gopher mound was found. As these mammals are highly desirable we stopped and put in two traps.

Driving on to the old camp we sought the shade of a large yucca where we spent the hottest hours of mid-day. We could not find the road that turned into the Chemehuevis Mts. on our way down, so turned back in search of it. The gopher set was examined but had not been touched. 1 mile farther north another was located and two traps set. Gophers are extremely scarce and the capture of a few specimens will no doubt reveal them to be a new form.

We drove into Yucca to get road directions and tank up with gas.

The sky was heavily overcast this afternoon and rain fell in the extreme north end of the valley.

On our way out several fresh gopher mounds were found near the roadside and we stopped for the night. This locality is 1 mile south of Yucca, Mohave Co., Arizona. The soil is the coarse sandy type with a scattering of yuccas and a rather heavy stand of creosote and other brush sprinkled with several species of cactus.

Five gopher sets were made and two lines of mouse traps set.

The night was warm and the boys caught a great many insects in the light of the lantern.

We looked at the mouse traps about 10 p.m. and found 5 *Dipodomys merriami* and 7 *Perognathus amplus* had been taken.

By the light of the gas lantern we found a brown-shouldered lizard resting on the horizontal limb of a creosote bush where he evidently was asleep. When roused it fled into the center of the plant.

Arriving in camp Phil's sharp ears heard the buzz of a rattlesnake and sure enough the blasted reptile was under my bed. The 22 settled him but the snaking was not over. A few minutes later Phil's sharp ears again heard a buzzing and a sidewinder was found near the truck. It had become alarmed at our talking and sounded his rattle. He was sacked alive! Two rattlers in five minutes at midnight. Some camp!

April 20, 1938

The gopher traps held 1 specimen and the mouse traps 6 more *Perognathus amplus*, 5 more *Dipodomys merriami* and 1 juv. *Neotoma albigula* with his skull crushed.

After breakfast the boys drove back to the gopher sets down the valley and secured 1 more specimen.

Heard Scott orioles singing nearby during the morning and saw a Cactus wren, 2 Desert sparrows and a Sparrow hawk near camp. Set two more gopher sets in wash nearby this evening.

Looked at the two lines of mouse traps about 9 p.m. 2 *Peromyscus eremicus*, 5 *Perognathus amplus*, 3 *Dipodomys merriami* and 1 juv. *Neotoma albigula*.

April 21

The mouse traps held 6 more *Perognathus* and 3 *Dipodomys merriami*. I tried to find more gopher sign up the road but was not successful. One of the traps set last night was missing this morning. Some kit fox had taken gopher trap and all. Blast his skin.

Sidewinder tracks were everywhere along the road this morning. This place certainly is sidewinder alley.

The boys again drove down the valley to look at their gopher traps.

About 3 this afternoon a CCC boy came into camp for a drink. He belonged to a range investigation division stationed at Yucca. He had just killed 2 rattlesnakes a short distance away.

The traps were again reset over the same type of ground. Phil and I drove down to the gopher traps this afternoon and found two specimens had been taken. As we sat in the tent this evening a tricolored ground snake ran through the tent and was captured.

April 22

The traps held a fair catch this morning - 2 *Onychomys*, 11 *Perognathus longimembris*, 7 *Dipodomys merriami*.

The gopher traps were empty. Several were reset but we did not visit them this evening.

Mouse traps were set in the same general region again this evening.

April 23, 1938

The traps held a short catch - 5 *Perognathus longimembris*, 1 *Onychomys*, 4 *Dipodomys merriami* and an immature *Neotoma albigula*.

We decided to move camp into into the Chemehuevis Mts. so all hands layed to the work and we were soon on our way. we tanked up with water and gas at Yucca and then set out down the valley to pick up our gopher traps. The first set 3 miles south of Yucca held a gopher badly eaten by ants. 4 other sets farther down were empty and all traps were picked up.

We started to search for the turnoff that led into Bruno Canyon but the only resemblance of a road we could find was old and was interrupted by a sandy creek bed 75 ft wide. Several snake tracks were found when we ~~was~~ crossed the dusty road, each was investigated and with one we were lucky. A king snake was found in a small pile of dead brush. This locality is 12 miles south of Yucca, Sacramento Valley, Mohave Co., Arizona. After a fruitless search for the road it was decided to drive down towards Topock and find out if it is possible to get into the range from the north end. At a point about 8 miles south of Yucca and still in the Sacramento Valley we picked up two horned toads, one was light and the other dark.

We turned off on the road marked Mohawk Mine but after almost six miles it was found that the road led to the west slope of the Chemehuevis range so back we turned as it is only the eastern side that is interesting. The next turn in was marked "49 Placers" and it seemed to be well used. We had hardly left the main highway when a lad driving an old Model T loaded with ore came up. He knew the region well and was hauling from a mine not far from where we wished to go. He gave me full directions and we set out more contented for indeed I was about to leave the region for a station in the Hualapai's. We were soon out of the very dry Colorado River area and again on rising ground with its abundant growth of cat claw, and other desert shrubs.

The altitude was 1000 ft when we left the highway and rose gradually to 2000 when we entered a rather narrow canyon, over a well used road. At the mouth of the canyon we left the 49 camp road which continued on around the base of the range. About 1 miles up this canyon our road forked again and we took a rather dimly marked road that was signed "Lucky Star Mine". The canyon narrowed and the road got worse. Tree yuccas began to appear and one lone giant cactus was passed. About 3½ miles up this canyon we came to an old stone cabin and a lot of prospect holes burrowed into the side hill. A rather

level spot near the cabin looked good and we made camp. Desert shrubs were abundant. Cat claw, tree yucca, a few ocotillo (almost upper limit), a very very few creosote (also extreme limit) and an abundant growth of several species of brush that I have always found in upper Sonoran. A great big thorny bush that was almost a tree in some spots was growing abundantly - also many nolinās.

A Cooper hawk sailed over as we drove up. Desert quail were common. House finches were seen near a damp tunnel near the bed of the wash and a rather deep hole was well filled with water tho the presence of dead mice made it unfit for drinking. A Canyon wren sang from the rocks nearby and several Scott orioles were heard singing on the hills.

The altitude in the truck read 3200' but I am not certain just how dependable this reading can be.

The boys ran two lines of traps over the hill south of camp. We looked at them by lantern light and were surprised to find *Perognathus longimembris* in the same ground with *Perognathus intermedius*.

While looking over the camp site a fine rosy boa was found by the roadside.

April 24, 1938

Phil found gopher workings when setting his line last night so placed two sets out this morning. The holes were very small making trap setting difficult.

The mouse traps held a good catch of *Perognathus longimembris*, *Perognathus intermedius*, *Onychomys torridus*, *Peromyscus eremicus* and a rat trap held a *Neotoma albigula*.

I was kept busy with the skins all day and the boys set up camp. Phil fixed a place in an old ore car where he thought he could turn his snakes loose. While at work at this snake pen he caught another rosy boa. It crawled out of the rocks right where he was working.

Two Chuckawallas were found in the rocks and later we pried the rocks apart and captured them. One was a huge fellow.

Later in the afternoon we found one of the boas had escaped so all the reptiles except the horned toads and turtle were packed for safe keeping.

A number of Schuylers were set out for woodrats this evening and the small traps rebaited. The gopher traps were

both plugged so Phil reset them. Heard numbers of poorwills calling about camp after sunset.

A Scott oriole triangle is most interesting. Yesterday a bright male and a year old male were both courting the same female in the yuccas just above camp. The younger one was doing his best to coax the female into a yucca grove on the northwest side of the creek, while she and the bright male wanted to build a nest in the yuccas on the southeast side. The older male would chase the younger one into the northwest grove and the female would follow them then she would show some attention to the younger one. Then the males would both sing and again fight. This time the young one would chase the old one back to the grove on the south east side, the female following and again the serenade and quarrel. Today the younger fellow got a female of his own and they quieted down each bird singing wildly in his own territory, apparently contented.

April 25, 1938

The traps held several *Perognathus longimembris*, a *Peromyscus* or two and 7 *Neotoma*, six of which were *N. albigula* and 1 *N. lepida*.

The boys started out to explore the upper canyon soon after breakfast. They returned about 4 p.m. tired out. They had been to the summit of Crossman Peak and brought back some good birds. They reported gopher working on the upper slope of the peak almost at the summit, also they saw Woodhouse jays.

The weather was unsettled and several showers fell during the afternoon.

On the ridge above camp Phil caught a Patch-nosed snake as it crossed the trail in front of him.

A fairly heavy stand of single-leafed pinyon pine was found on the eastern slope of the peak but no juniper.

Just around the bend from camp not more than half a mile was found an old mine - no doubt the "Lucky Star". When we first camped we thought this spot was the Lucky Star but are probably mistaken. However, it need not affect the collecting locality for it is all the same type of ground.

Poorwills were again heard this evening in spite of several hard showers of rain.

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April 26, 1938

The traps held 3 *Neotoma albigula* and 1 *N. lepida*, only the latter was saved.

After breakfast we all went up to the old mine to hunt. Cactus wrens were singing everywhere. I found a pair of Scott orioles building their nest. It was of yucca fiber and grasses. I watched the female work for 15 minutes. She would snap off length of broom grass near the ground and weave it into the yucca fibers that had been shredded from the lower leaves. She also used some nolina fiber that she would shred off and clip with her beak when the desired lengths were obtained.

I found a Say phoebe in an old mine tunnel. The nest held 3 eggs.

Near the house at the mine Phil found a Plumbeous gnatcatcher in a squaw tea bush. And a pair of Canyon towhees of which we collected the female.

I saw a Hermit thrush but failed to hit it and several Green-tailed towhees. Saw a Blue grosbeak near camp. Bill set a line of Schuylers for *Neotoma* this evening and Phil a dozen gopher traps. Had one piece of luck, the gopher he had been working for for last two days was caught and such a thing it is. Surely a new race at least.

A pair of doves flew over at sundown. Poorwills again calling and a Horned owl hooted an hour or more above camp during the late evening.

April 27

Phil's gopher traps were all empty this morning and Bill caught 2 *Neotoma albigula* in his rat traps.

After breakfast the boys packed up all gopher traps and with a shot gun and butterfly net they set out to spend the whole day on Crossman Peak.

I packed up two cameras and went up to the gnatcatcher and phoebe's nests. I had a lot of fun with the gnatcatchers, they were ideal subjects and the nest was never left unattended in spite of the camera being only 3 ft from it. I got my camera setup about 9:30 and worked until 11:30. during the two hours they changed places on an average of every 20 minutes. The male was much more solicitous than the female. He was always ahead of time when he returned for his turn on the nest.



The phoebe was much shyer and returned but once while I was near the camera. However, she could hardly be blamed for her shyness as the pictures were being made by flash bulbs and they made a sudden light of extreme brightness.

The boys returned at dusk after a very successful day. They got 4 gophers off of Crossman's Peak, all of them are tiny and rather light colored.

They also got 4 birds - 1 bushtit, 1 Wrights flycatcher, 1 White-crowned sparrow and 1 Canyon towhee, all of which were taken on the peak.

They reported seeing jays (Woodhouse) but were too wild to get within range of. They saw several White-throated swifts, many Green-tailed towhees and a Sparrow hawk.

I noted a half dozen Turkey buzzards today. In fact this species has been seen nearly every day during our stay.

April 28, 1938

Bill's Schuyler traps held a single immature *Neotoma albigula* which was not saved. He picked up all his traps and will reset them in another place this evening.

Phil set 3 gopher sets near camp. About noon the owner of the mining property came chugging in in his old Dodge car. He proved to be an interesting fellow and told us a lot about the region. Among other things he told us that we were camped at Scott's Well. After lunch we all went hunting up the canyon. Numbers of birds were seen and a dozen collected. Hermit warblers, Townsend warbler, Hermit thrush (probably White Mt.), Wright flycatcher, Gambel sparrow, House wren, W. warbling vireo, Green-tailed towhee (saw several more), Scott oriole. Saw a Violet-green swallow, another Woodhouse jay (very wild).

We made the gopher sets near the house at Lucky Star Mine. Bill set his rat traps along the creek bed this evening and Phil had a nice female gopher in his trap near camp. Six mice traps were set in camp.

April 29

Bill's rat traps held 3 *N. albigula* which were not saved. The six traps set in camp held 2 *Dipodomys merriami*, 1 *Peromyscus eremicus* and 1 *Onychomys*.

I was busy all day getting up the specimens taken yesterday.

Phillip went up to the mine and set 3 more gopher traps. A pair of mockingbirds have chosen the flat just across the canyon for their summer home and the male keeps up almost a constant serenade. There are some fruitea bushes of fair size over there but I presume the pair will use yuccas for their nesting site for this species abounds there amid them of many sizes.

While Phillip set his gopher traps this morning he shot the flicker I had found nesting two days ago. The bird proved to be *C. crysoides mearnsi* and the nest held 4 fresh eggs. It was in a yucca and about 6 ft above the ground. He also brought in a pair of Brewer sparrows, coincidently they were male and female but showed no signs of breeding. He also had a Golden ~~pale~~ated warbler and a Rock wren.

About 4 p.m. they went up again to the old mine to set a line of mouse and rat traps.

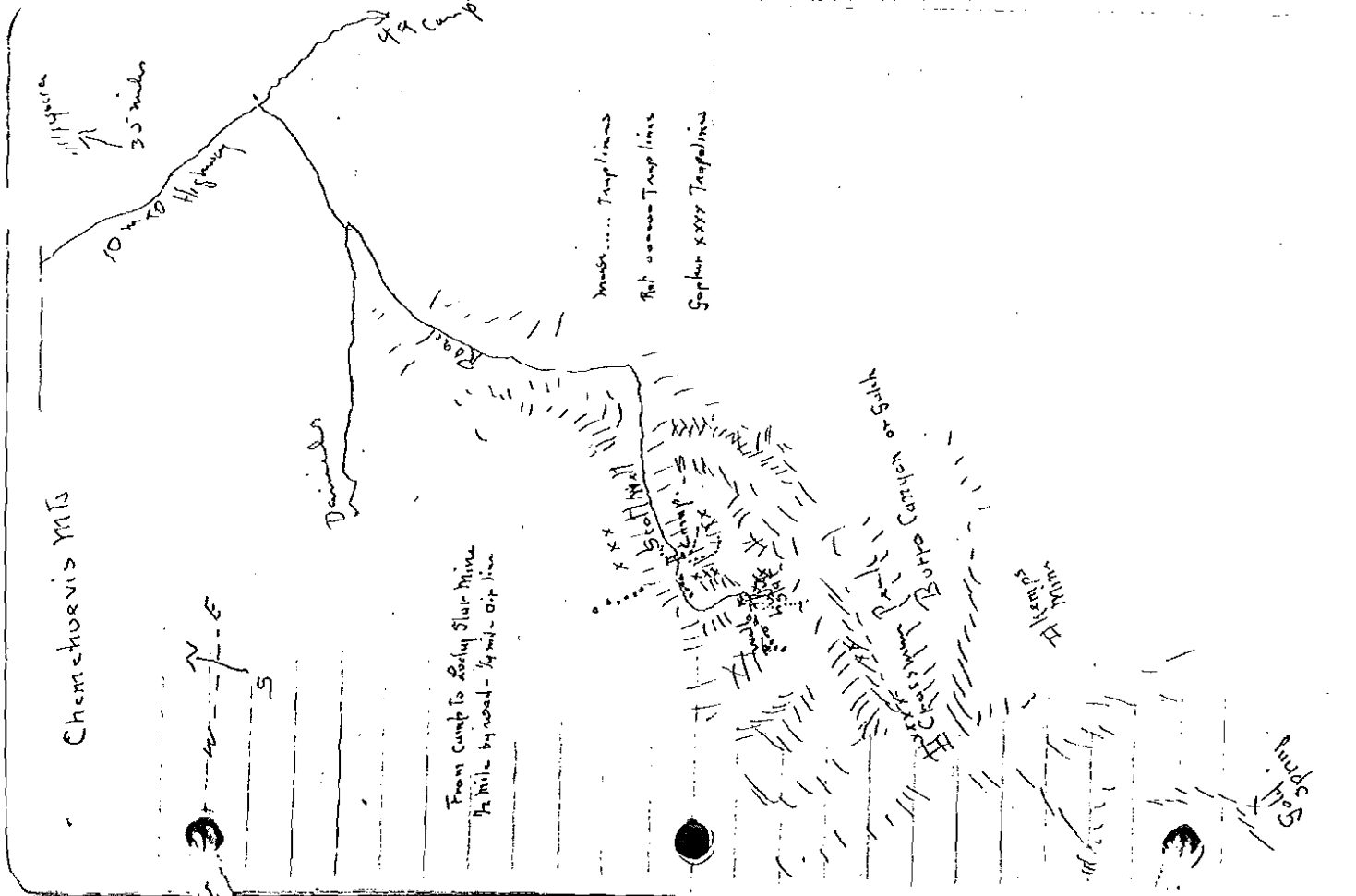
Bill set a dozen Schuylers up the wash amongst the rocks almost to the Old Well and Phil set 40 mouse traps up the hill through the yucca - Squaw bush and Big Thorn bush association. Not far from camp on their way up the canyon a flock of 5 Woodhouse jays were found. One was crippled but escaped. While after the jays a male poorwill was collected when it flew from its day roost from under a large thorn bush. Near the trap line a pair of towhees were found and the male collected. A rabbit was shot near the Old Mill and the gopher traps held 1 specimen. Another female - this makes 7 from this region and all are females. This seems odd when the opposite was true in the Sacramento Valley.

A cold wind came up just after sunset and the night was frigid.

April 30 1938

The mouse trap line held 2 *Perognathus intermedius*, 1 *Perognathus longimembris* and 4 *Peromyscus eremicus*, while Bill's rat traps held 4 *Neotoma albigula* and two that I took to be *Neotoma mexicana*. If this is true it will be the most western locality of capture for the species and probably a new race.

I went for a short hunt into the canyon south of camp. I collected 1 towhee and saw a Calavares warbler. Saw many linnets and Scotts orioles. Heard Cactus wrens and saw a shrike. Cactus wrens have so far been able to keep out of gun range. I do not believe I have ever been where this bird was as shy and yet be common as they are in this locality.



Chemehuevi Mts

10 mi to Highway  
35 miles

Dairies

From camp to Lucky Star Mine  
1/2 mile by road - 1/4 mile - dip line

Trap lines  
Trap lines  
Trap lines

Canyon

Rude's Pond

Bill set his rat traps in the same general area as of last night for more mexicana.

Phil reset some of the gopher traps and brought in another female - no. 8. It is also very odd that the beasts only work in the daytime. He has not yet brought in one from his rounds in the morning.

May 1st, 1938

After an early breakfast we all set out for the Lucky Star Mine. Bill had a line of rat traps up the gulch from the mine in which a woodrat was taken. It was another of the furry-tailed ones.

Phil's gopher traps were empty. I took my cameras for a last shot at the gnatcatcher and Say phoebe. The gnatcatchers had hatched and the little black things looked like they were about 2 days old. The birds both fed them but when the female was hovering she wouldn't let the male give food to the young. She would take it and rekill it on the edge of the nest and then stuff it into the babies. When she would rise up to feed she would che-che to attract them. When the female was off and the male hovering he would chee like she did before feeding.

The phoebe was faster today than she was last time. I was much interested in the reaction to the flash. 5 shots were made. The first 3 she would hold her pose a moment or two after the flash then fly out in a very startled manner. But the last two flashes she merely batted her eyes and settled down onto the nest as if only a flash of lightning had happened. Before at my slightest move she was gone.

A towhee shot near camp and the woodrat were the only skins for the day and we all cleaned up, packed the truck and made ready to leave for the Hualapai Mts. tomorrow.

Phil collected a striped racer near camp this afternoon when going to the well for water. He picked up all his gopher traps this evening. No more luck. Killed an Ammo-spermophilus while getting his traps.

May 2nd

Up early and began preparing to leave. The weather had turned cold with scudding white clouds driven by a strong north west wind. The first male Phainopeplas came in early today.

We left the old camp about 8:45 bound for the Hualapai Mts. Our route ran through Yucca and Kingman.

I was much impressed when going down the canyon to see the changes of vegetation as the elevation dropped. At the mouth of the canyon the Palo Verde was predominant sprinkled with ocotillo and cholla cactus.

Looking back at Crossman Peak we could see rock dykes and hill crests that were familiar ground and we had pleasant memories of them as we bid them farewell.

We arrived at Kingman at 11 o'clock, tanked with gas, bought a few needed supplies and asked directions. Our route led eastward along the main highway 2 miles, thence south straight into the mountains.

The elevation rose steadily from 3600 ft at Kingman. This region on the north slope of the Hualapai's is noticeably different in vegetation from that of the western side and is probably of the higher plateau influence. Several kind of cacti not seen on the west side were found.

As we entered the pinyon pine belt a grayish chipmunk was seen and gave zest to the coming collection.

We entered the Hualapai State Park about 11 miles out of Kingman and found a CCC camp 1 mile farther on. This part of the mountain was over 6000 ft in elevation and in the yellow pines, though more of the trees were very large. Inquiring at the CCC camp I was informed that an old mine 3 miles farther around the mountain was out of the park and was higher in elevation so we set out to look the ground over. The weather was much colder, in fact quite frigid and the road was steep, rough and very rocky. It led through a region thickly chaparraled with scrub oak and several other shrubs. Large boulders studded the mountain side. On the opposite side of the canyon an open stand of rather small pines with thickets of oaks covered the mountain.

Several pairs of spotted towhees and a few chipmunks were seen. We reached the end of the road and found a rather favorable campsite on the dump of this old mine which is known as the "Democrat Mine".

The wind was blowing a gale and cold as the north pole.

After a pick-up lunch we searched about for gopher sign and found numbers of fresh mounds.

Camp was set up and the tent well ditched as the heavy clouds gave promise of rain by sundown.

Phil set a half dozen gopher sets and Bill put out his Schuylers near the base of a large dyke of granite boulders in the brush up the mountain from camp.

I went hunting but the wind was howling through the trees with such violence that I could not hear a single bird note.

I killed 1 Hammonds flycatcher and shot at a Hairy woodpecker but failed to kill it. Saw a pair of Golden eagles flying over the peak and a Stellar jay above camp.

As Phil was returning from his traps he chanced to look at the first set he had made and took from it a male gopher. This beast certainly looks different from those of the Chemehuevis.

About sundown and just after we had finished our meal it commenced to snow and by 8 o'clock the place was white. The storm was being driven by a violent north wind and cold, cold, cold. Quite a contrast from the 105 degree weather we had at Yucca during the first of our trips two years ago.

May 3rd, 1938

Dawn broke with a snow blanket 2 inches deep over everything. Fortune favored us, tho, as the sky was almost clean of clouds and the wind had died down.

After breakfast I went hunting down the road. Bassarisc tracks were seen in the mud nearby and farther along the tracks of at least 3 different skunks (all the same species) had wandered down the wheel ruts.

Birds were not abundant. I saw 4 Spotted towhees and collected 3 of them. 2 of these have very small beaks and are a mated pair. The other a large-beaked female had an egg in her oviduct when I skinned her.

The day was ideal for hunting as the moist ground could be trodden almost silently. As I came about a sharp turn a pretty male Sharp-shinned hawk was seen perched on a rock on the upper side of the road and not over 15 feet from me. I killed him with my auxilliary as he jumped up. I saw a Sparrow hawk and a pair of Western gnatcatchers. 2 chipmunks (collected 1 of them).

Phil brought in 5 gophers during the day and Bill's Schuylers held 1 Peromyscus and a rock squirrel.

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Phil went hunting and killed a Ruby-crowned kinglet and a Hammond flycatcher. Bill brought in a gnatcher. A pair of buzzards were seen near camp and a Canyon wren was heard singing about sundown.

The boys got out their rat and gopher traps this evening. Bill and I set two steel sets for *Bassaris* along the road this evening.

May 4th 1938

One of the Schuylers held a spotted skunk. The trap was in the boulders on the brushy hillside. Phil's gopher sets were empty. It must be too cold at night for these animals to work. As we were eating our breakfast 4 male Broad-tailed hummingbirds were seen fighting near the top of a leafless tree and one was shot.

I hunted down the creek a short distance to get warm. Found a very few birds, collected a couple of Spotted towhees, a Calavares warbler and a Black-chinned sparrow. Near camp Phil shot a pair of Black-headed grosbeaks. The male was in full song. The migration seems at its height and the birds that are arriving (that is a certain number of the species) are to be summer nesters.

The boys looked over the traps this evening. Phil set a line of mouse traps through the grape tangle in the creek bed. Bill's Schuylers held 3 rock squirrels, 3 chipmunks and a *Peromyscus*. Phil brought in another gopher and saved the day for this species.

May 5th

The mouse trap line in the creek bed held 11 *Peromyscus*. Bill's rat traps held 3 chipmunks and 2 *Peromyscus*. One gopher was in the gopher traps. Phil pulled them all up this morning and reset them. The gopher signs have been almost all trapped and I don't expect many more.

Late this evening Phil brought in part of his gopher traps as they were in places that had not been actually used.

Bill reset all his rat traps this evening. They were placed about rocks in the chaparral a short distance down the mountainside.

The wind was bitter cold this evening and scudding clouds seemed to foretell another storm.

May 6th, 1938

The cold, cold north wind blew all night and was still going when we got up.

Phil's last few gopher traps held a fine adult male and a juv. male.

Bill's traps held 3 Peromyscus and the small steel traps another rock squirrel. All traps were brought in as we are moving today down to Wickiup on the big Sandy River where I hope the weather will be more pleasant.

When on his trap line this morning Phil shot a large nuthatch and while eating breakfast 8 Painted redstarts flew into the leafless oaks near camp. 3 male specimens were taken. Both sexes were in the flocks. A junco was seen but too shy to collect. It looked like one of the oregonus group. While I was preparing the few good bird skins this morning Phil shot a pair of Virginia warblers near the creek.

We left the camp at 10:30 bound for Kingman and thence south the Big Sandy.

Several small snow banks were still to be seen on the north east slope of the Hualapai Peak.

At Kingman we gassed the car, bought a few supplies and left. Our route led down the valley almost in a north to south direction. The altimeter showed 3400 at Kingman and at a distance some 10 miles south stood at 4000'. This was the highest spot in the valley. The region was one of low brush not knee high and grass. It looked good for certain types of Perognathus and Dipos tho we didn't stop to investigate. Along the roadside for many miles a beautiful species of mauve colored penstemon was in full bloom. We rode through miles of juniper and very scattered pinyon, then dropped to the Big Sandy River. Here the vegetation changed to yucca and shortly to mesquite, cat claw and other desert shrubs commonly found on the Colorado Desert.

Huge cottonwood trees dotted the river bed amid a verdant growth of large mesquites.

We arrived at Wickiup about 2:30 and camped near the river, 1 mile east of the P.O., altimeter 1850. Great mesquite trees were all about and near the track a pair of Lucy's warblers were much disturbed.

Near camp Phil found a Black-chinned hummer's nest with one egg.



125 mouse traps were set near the P.O. amid creosote and cat claw on rather coarse, sandy and gravelly soil. Much *Dipodomys* work was evident. We looked at the traps about 9 o'clock and found one Silky pocket mouse, unquestionably one of the *longimembris* group, 8 *Dipodomys merriami* and 1 *Onychomys*.

May 7th, 1938

All told, the traps caught 21 *D. merriami*, 2 *Perognathus longimembris* and 1 *Onychomys*.

Phil and Bill set a dozen gopher sets in a nearby field of young corn.

While skinning I saw a Vermilion flycatcher building its nest (or rather their nest for both of them worked) in a mesquite tree some 50 ft from where I sat. The pair worked industrially all morning and then stopped for the day about 1 p.m.

The large warbler finally disclosed her nest site and I found 3 incubated eggs in a beautiful little nest tucked in a cavity of a mesquite 8 ft up from the ground.

Traps were again set in the same general locality as last night. Just at sundown Phil brought in 4 gophers.

May 8th

The trap lines held 16 *D. merriami*, 5 *Perognathus* and 2 gophers this morning.

I looked at the hummer's nest last night by flash light and found the old bird on the nest. This morning there was but the one egg.

The birds here are representative of the Desert mesquite country. Saw a pair of Arizona hooded orioles, many Bullocks, Abert's towhees, Vermilion flycatchers (very abundant), Black-chinned hummers, Say phoebe, Rough-winged swallows, Long-tailed chats, Dwarf cowbirds, Phainopeplas, Cactus woodpeckers, Gila woodpeckers, Ash-throated flycatchers, White-winged doves (common), Mourning doves (abundant). Heard a poorwill near camp after sunset and a Great horned owl during the night.

The traps were again set in the same locality for more *Perognathus*. Goldman named one franklin but I much fear he is mistaken in its correct identity. It is not an *amplus* but a *longimembris*. There is a possibility that some where in this region might be found the link and this would absorb all of those forms, described as *amplus* into *longimembris* group.

This evening Phil brought in 5 male gophers.

May 9th 1938

The traps held 14 *Dipodomys merriami*, 3 *Perognathus longimembris* and 1 *Onychomys*.

Phil set several more gopher traps for a last try. We already have a nice series of topotype but always like more.

Saw several Cooper tanagers during the day and found two more Black-chinned hummers building.

The air has been heavy with the sweet mesquite blossom perfume today and combined with an 85 degree temperature has been simply ideal.

I cooed a Mourning dove into camp today and how surprised he was when he found he was being mocked.

We all bathed in the river today, first real bath in 3 weeks and certainly felt good. Will leave tomorrow for a last try on Stephen's woodrats in the Hualapais before starting home.

Traps were set again in the same ground for a last crack at *Perognathus* 1. We have 10 but a larger series will do no harm as it will be controversial.

The gopher traps held 2 more gophers. On his way back to camp Phil caught a king snake.

May 10th

The mouse traps held 9 *Dipodomys merriami* and 7 *Perognathus longimembris*. When after water Phil saw a peculiar bird. Returning with the 32 he brought in a nice adult Western yellow throat

We packed up and after early lunch left for the Hualapai Mts. at 11:30.

The road led west from Wickiup and rose sharply into the hills. At the first rise we passed into the juniper - yucca - giant cactus belt. As elevation was gained we passed out of the giant cactus and came into an area of huge sumac bushes.

We passed a small corral 5 miles out of Wickiup. A lone live cottonwood tree there was occupied by a Red-tailed hawk

and almost directly beneath the hawk's nest was an Arizona hooded oriole's nest in a clump of mistletoe. We stopped here for an hour or so much to the distress of the hawk.

A bunch of CCC boys came past in a car and informed us that Horse Tank, the place we thought we had stopped at was 2 miles farther on so we cranked up and left.

Numbers of Desert quail were calling in the brush.

We found Horse Tank to be an agreeable collecting locality. The altimeter showed 3600.

The region was well covered with scrub oak, juniper and yucca. Only a few of the large sumacs were here. Birds were numerous - Scott and Arizona hooded orioles, Cactus wrens, mockingbirds, House finches, Mourning and White-winged doves, Cactus woodpeckers, Berwick's wrens, a Canyon towhee were some of the birds noted.

Great outcroppings of boulders were examined when found to be alive with woodrats.

Bill set 21 Schuylers in the rocks and Phil set 75 mouse traps up the brush covered slope south of camp.

Poorwills were heard during the evening. Bill brought in a young gopher snake.

May 11, 1938

Phil's traps held 4 *Perognathus longimembris*, 2 *Dipodomys merriami*, 1 *Peromyscus eremicus* and 1 *Peromyscus boyleyi*.

Bill's rat traps held 13 *Neotoma*, 4 of which were *stephensi* and the rest *albigula*.

The boys went north down the wash this morning and found a watering trough about  $\frac{1}{2}$  mile down the canyon. They brought back 4 birds, 1 Cactus wren, 1 cowbird, 1 Wood peewee and 1 male Costa hummer. They saw a large Brown thrasher, probably crissal but uncertain, and 1 Canyon towhee.

Bill looked over his traps again this evening and brought in 1 *Ammospermophilus* that had been caught during the afternoon.

Phil set a line of mouse traps over the rocky hill north of camp. He also shot several bushtits from a flock. The flock was composed of two different families. The youngest ones

had not yet attained their full bright tail and were certainly not more than a few days out of the nest. The older of the bunch were fully feathered but had soft skulls and were at least 3 weeks older than the smaller companions. Phil said there were a dozen or more birds in the entire flock.

May 12th, 1938

We were all out early this morning. Bill's rat traps held 2 more *Neotoma stephensi* and 3 *Neotoma albigula*. Only the 2 *stephensi* were saved.

Phil's traps held 2 *Dipodomys merriami*, 1 *Onychomys* and 1 *Perognathus* 1. Only the *Onychomys* was saved.

We packed up and left for home leaving the old camp at 8:30. The road ran westward across the Hualapais reaching an elevation of 4100 ft about 3 miles from our camp. The region was heavily overgrown with upper Sonoran plants. sumac, juniper and scrub oak predominating. Saw several cottontails, a Spotted towhee, a Berwick's wren and a Woodhouse jay. The summit was an abrupt change: immediately we descended into junipers and yuccas with a fair growth of giant cactus. Surely an interesting place to work.

We reached Needles, Calif. 11:30 and home at 8:30 p.m.

August 17 - August 23, 1938

All American Dam, Potholes etc.

Imperial Co, California

August 17, 1938

Left San Diego at noon, arrived Winterhaven 7 p.m. Spent evening catching beetles in Standard Oil Station, camped on desert. Cool and pleasant.

August 18

Spent the day on s.w. part of Sect. near Andrade, just below Imp. Canal headgate. 2 imm. Green herons, 1 Spotted sandpiper flushed from trash strainer in canal.

Willow bottom - 1 White-winged dove, numbers of West. kingbirds, 2 Gila woodpeckers, many Mourning doves, several roadrunners, both seen and heard brr - brr-brr, Seen flickers, both Red and Yellow. A female Cooper tanager with 2 young rather wild, 1 Texan nighthawk flying about through trees. 2 pairs Crissal thrashers, several Blue grosbeaks (1 shot), Cactus wrens 6, verdin 1 pair (1 shot), Aberts towhee several pairs.

At a point 2 mi west of Ft. Yuma saw medium-sized flock of Cliff swallows feeding over a newly irrigated maize field. Fired a shot at a tanager high up in a cottonwood tree and flushed a Western horned owl from his day roost in dense center of tree.

Roadrunners are very common in this section of the valley. Saw shrike (several), many Turkey vultures.

Put up a few skins and left day camp about 5 p.m., bought pie and milk at Ft. Yuma then drove out Picacho road.

In field 1 mi north saw 1 mockingbird, large number of White-winged doves, in fact they seemed more abundant than Mourning doves. Three Meadowlarks in recently cut alfalfa field. Flock of Cliff swallows feeding over maize field, shot 2. Number of half-grown Desert quail along road. Saw 1 Black phoebe at main canal bridge near mouth of Picacho Wash, also hummingbird feeding in tobacco bush, but too wild for shot. Will camp on trail tomorrow. Spent the night on open desert about 2 miles above mouth of Picacho Wash.

After sunset 8 Texan hight hawks were seen flying towards the cultivated region to feed. A greater part of the population has left for in spring this species is very abundant. Heard a Horned owl hooting from the trees along the canal during the early evening hours.

August 19, 1938

Stopped near Picacho Bridge in search of the hummer seen yesterday. Saw 1 male Anna & 2 females, one of the latter was collected.

Saw an Ash-throated flycatcher in mesquites & pair of Blue grosbeaks in old cotton patch. Drove out towards the Syphon Power Station. 1 Black phoebe seen near bridge, 1 immature Green heron on canal bank, several Rough-winged swallows flying over canal.

Several linnets in full molt sat on fence near roadside. 75 to 100 English sparrows dusting on beach near old cotton gin.

Drove over old levee near Bard. Large narrow lake still well filled with water bordered heavily with cattail tules. Saw a Harris hawk fly past through the willows; the quick wing beating the sailing flight quite characteristic. Saw Sonoran Red-winged B.B. Heard and saw both coots and galinules. Watched a galinule feeding on scum picking at surface much like a coot. Their presence, however, is easily detected by the very high pitched note, quite different from coot once it is heard. Shot a Traill's flycatcher, Warbling vireo and B.H. grosbeak from willows near the lake. Saw flicker in willows and Black phoebe feeding over lake surface & perching on 3 vantage points. Watched it for over an hour while shaded up during hot part of day.

In late afternoon drove up to Potholes. 3 Snowy egrets were seen below the dam, their yellow feet plainly visible through glasses when they flushed. 2 willets were seen on mud flat in river. Their call & white spot in wing identified them positively. 1 lone cormorant seen flying over Laguna dam. Many English sparrows about buildings seemed to have increased notably in last 10 years.

Spent an hour near Laguna Dam. Saw 5 more Snowy egrets in flock flying down river. 2 Black-crowned night herons flushed from the day roost as an Indian roared past in a small boat. 12 cormorants flew into the rapids below the dam to fish as I left at sunset.

I drove back to the high desert mesa above Picacho Wash to spent the night. The route led along the drainage canal where a great number of Texan night hawks were seen. Many more than seen last night.

August 20, 1938

Dawn came on an overcast sky pioneering rain but also a pleasant day afield.

On my way down to the cultivated area I spent an hour or two in Picacho Wash - ironwood, Palo Verde & smoke bush predominating. Many Mourning doves feeding on a good crop of iron wood and Palo Verde seeds that were just falling to the ground. 1 White-wing in the lot. Flushed 1 W. horned owl, saw 1 Ash-throated flycatcher & 3 Rough-winged swallows, 1 pair Gila woodpeckers, bunch of young Desert quail.

No phainopepla present although there seemed to be some berries on the mistletoe. This seems odd tho there is some chance for speculation regarding the coastal presence of this species during summertime.

At the bridge I shot another female hummer from the tobacco bush.

I drove up the main canal; several pairs of Blue grosbeaks were seen and one male was observed carrying food to young, thereby establishing positive breeding record for the species.

Numbers of Western kingbirds were seen along the trees that bordered the canal. Mourning doves were abundant, in fact I have never seen this species so thick. Saw 1 Green heron and 1 Black-crowned night as I drove along. Several Turkey vultures and many roadrunners.

Turned in at ranch for an hour or so. Figs and dates ripening. The former were attracting numbers of Black-headed grosbeaks and a single family of Bullock orioles were the only ones noted in the valley so far. This species is always attracted by fruit like figs or dates. The pair of Cactus wrens and 2 pairs of Gilas are still present.

A Sparrow hawk flew into the large cottonwood. 2 small flocks of Dwarf cowbirds were seen, a dozen or more in each flock. This wandering of small flocks of cowbirds seems to be a breeding habit. They course from the feeding grounds to the willowbottoms where they break up into 2 or 3 in search of nests in which to lay.

Several shrikes apparently 4 or 5 young and parents were seen about the place.

About 2:30 p.m. I drove up to the new All American Dam which is the northern boundary of my Bard section. Saw 3



Spotted snadpipers on the rocks below the gates, all immatures. About 40 Snowy egrets were seen & counted near a sedgy pond. 3 Wood ibis were with them and 1 was decernable with my glasses about half a mile down the river on the Calif. side. A lone Great blue heron was resting on a gravel bank in the middle of the pond and an adult Florida galinule was feeding near the holes, the voices of several more were heard from within the tule patch.

Two cormorants were fishing in the turbulent stream near the head gate. And a lone immature Black tern was seen flying along the river. It passed close enough to shoot but I refrained owing to the difficulty of retrieving the bird from the swift current where it would have fallen.

Cliff, Rough-winged and Bank swallows were in abundance near the dam.

I chanced to cripple a Rough-winged swallow and it alighted on the outer edge of a tule covered mud flat. By circuitous route I was able to get to the spot by wading and when doing so I flushed a loose flock of 15 - 20 Large-billed sparrows, 4 of which I collected. The flock separated and part of them went over onto the Arizona side. New record for state???

Returning to my desert night camp above Picacho Wash I shot a Bank swallow from the telephone wire at Potholes, 2 others were with the species.

August 21, 1938

The night was hot and humid tho I rested fairly comfortably. Sunup boiling hot at 4:45 this morning. Put up my six skins then to Winterhaven for gas.

Arrived at Potholes about 9:30 and plan to spend the day in the willows about the old lake bed. Saw 1 Harris hawk, adult, soaring, white rump conspicuous. Several tanagers, pair of Trail flycatchers that acted very broody, probably have young. A pair of Vermilions, the first seen so far were in a small cienega.

Left the truck near the bend in the laguna Dam intake and walked about 1½ miles into the willow-cotton wood jungle. What a change had taken place since I last visited this region. The old lake is completely dried up. Where once tules were growing arrowweeds have taken the ground and made an impene-trable jungle. Since the water table in the river bottom has been lowered owing to the control of the river's flow

a new growth is commencing to overwhelm the arrowweed. That is salt cedar. This species is bound to have an affect on bird life for it is even worse than eucalyptus in that it offers nothing for the birds but shelter. They don't even like to nest in it.

Swallows were abundant flying over the willows, Cliff, Rough-winged and Banks.

The day was indeed a scorcher so took it easy in shade after my hot walk.

A female Cooper tanager was feeding three fully grown young in trees near Potholes and two pairs of Long-tailed chats were singing. Probably late nesters or had been disturbed; anyway they were the last songsters that reminded me of spring, even the Song sparrows are quiet. A pair of Blue grosbeaks and a pair of Trail flycatchers are both feeding grown young. Shot a Yellow warbler, however, it looks like Brewsters and not sonorano. About sundown I drove to Bard for my daily ice cream and Coca Cola. Returned to Potholes and devoured the cream while watching the last glow of day on the water at the head gate. Saw a Yellow-throat along the bank but he was too elusive for a shot.

Drove up to the All American Dam to watch for bats. Saw two large flocks of ducks (Pintails) fly past in the dusk. Saw 2 Black-crowned & 1 Great blue heron in the dusk.

Night was hot and miserable. Drove out on the desert near the All American Dam and never in my life spent such a hot night. Lucky there were no mosquitos.

August 22, 1938

Up very early this morning and had breakfast before sunrise. Then drove out into the willow bottoms for an early hunt.

Birdlife very scarce. Saw a pair of Ground doves in burned area. This species is more abundant this year than I have ever seen it during the 20 odd years of observing birds in this region.

A family of Cooper tanagers, female and 3 young, were seen, evidently the male does not stay with the family as this is the second one I have seen and all are green birds.

Several buzzards wheeling in sky and an Ash-throated flycatcher that I hoped to be a magrotus but no luck. I guess Arizona crested are here only as a spring migrant. Shaded up again near the bend of the intake of Laguna Dam. A marshy area looked good so put on an old pair of shoes & tramped through the flooded region for an hour or more. Saw several Green herons, a number of Blue grosbeaks. Shot an adult female and a grown young with one shot. The female was feeding the young. Heard Yuma rails but could not catch sight of them. Saw 1 coot, several Ash-throated flycatchers, a trail or two. Heard and saw numbers of Song sparrows. Had fleeting glance of Yellow-throat but didn't get a shot. Heard more chats singing.

In camp during afternoon I shot an adult Sonora yellow warbler, male, a Least Vireo. The belly of this bird indicated it had incubated during summer but all dried up now. This is the first Least vireo I've collected in the region for years altho I've been in their habitat on each collecting trip.

The day was a scorcher. In late afternoon the clouds enveloped the sky & it cooled off, then at sundown a terrific dust storm came in from the south west, rendering visibility to a few hundred yards.

Numbers of Cliff swallows sported in this strong wind and a great time they seemed to have. Near Griggs' Place 2 male Phainopeplas were seen in the mesquite, the first for the trip.

Drove to Bard at sundown for cold drink & bottle of iced milk. Spent a miserable night on bank above Potholes. Not only was the temperature 110° but hosts of mosquitos.

August 23, 1938

Heard poorwills during night. Up early this morning and going by sun up.

Spent part of the morning in the willows below the All American Dam. Saw numbers of Blue grosbeaks - always paired off. Several families of Cooper tanagers, again only females with the young. Saw one female followed by a large squawking cowbird. The only young she had. I tried for some time to get a crack at the young cowbird but it was too shy, evidently a case of adopting the habits of the parent.

Ran onto a flock of 8 or 9 adult male Red tanagers, took one which was in full molt. Heard chats singing in three directions at the same time so guess they are just late in nesting. Fortunately for them there seems to be very few

cowbirds and maybe they will hatch their own eggs. Numbers of quail in willows.

Saw a Night hawk perched on horizontal limb as usual it was parallel to limb.

Drove to All American Dam and thence down along the levee to an area of newly grown tules. Heard the cheeck-chucking of a Yellow-throat and determined to secure the specimen. Spent over an hour and a half sweating in this hot humid tule patch. Shot one adult Song sparrow, heard and saw many others and collected one young Tule yellow-throat. Heard several others but could not catch sight of them. The heat and humidity of this tule patch was almost beyond endurance.

Saw the flock of Snowy herons and the 3 Wood ibis fishing in the still waters of a large pond below the dam.

As I have pretty well covered the region I decided to leave for home at noon.

On my way down the valley I saw numerous linnets perched on the wire fences near the road. Noted several large flocks of Red-winged blackbirds feeding in the newly irrigated cotton patches. 9 immature Yellow-headed blackbirds were counted in one of the flocks so this species can be added as a breeder to the region.

Arrived home about sundown after an uneventful run.

Huey and Phil Lichty

South-western Arizona along the U.S. - Mexican  
Boundary, south of Ajo

February 14 - March 24, 1939

February 14, 1939

Left San Diego about 8 a.m. bound for south-western Arizona, Philip Lichty as assistant. Lots of snow on mountains from Descanso to Buckman Springs. Arrived at Wellton about 3 p.m., left highway turning south over desert roads little used since recent rains which must have been heavy judging from banks cut by runoff in washes.

It took over 3½ hours to make 26 miles. Made camp for the night at Tinajas Altas. Clear starlit night, cool, no wind.

Feb 15

Broke camp & left about 8:30. Day bright and calm. Met 2 customs patrolmen in V 8 about 2 miles west of Tule Tank. Spent couple of hours talking with them. They gave us the dope about road conditions and also told us they had seen several antelope near Papago Well the day before. We saw peccarie tracks in wash mainly, evidently an old male and female with 2 or 3 very small young.

We stopped at Tule Tank and found the water partly overgrown with algae with lots of tadpoles and mosquito larvae in it.

At Tule Well we found the well had been cleaned recently and fairly good water available.

Our destination, the great lava floor which extends north from the Pinacata Mountains, reaching its northern limit a few miles north of the U.S. International Boundary, was reached about 4:30 p.m.

We each set a line of mouse traps over the Malapi and up to the summit of a large crater. Sign was not good but we hope to get some of the lava forms that are endemic to the Pinacata region on the north side of the Boundary.

On reaching the summit of the crater a Boundary Monument was seen on the Malapi not far beyond a crater just to the eastward. We determined to visit this monument on the morrow.

Feb 16

Night was cold and our heavy beds were only enough for moderate comfort.

My trap line was absolutely untouched, every trap unsprung. Phils' held 4 *Peromyscus eremicus*. They seem to be slightly darker than Yuma specimens but shall await comparison for positive identification.

After breakfast we walked over to the monument seen from the hill top last evening. It proved to be No. 181 and our camp is located about 2 miles N. W. of it.

Saw a Cactus wren and shot a Desert jackrabbit. These proved to be the only two living things seen that were within gunrange and desirable for specimens in the 4 mile walk. A pair of ravens were seen at a distance and fresh antelope tracks were found in the flat.

Phil set 7 Schuylers in the lava boulders on the hillside, hoping to get a wood rat. Sign was very scarce and consisted of but a few fecal pullets and some short cut bits of weed stems in the rock crevices.

I set about 45 mouse traps up a rocky ravine that ran up the western slope of the hill. Creosote and a few other shrubs formed the scant vegetative growth. Like other sections of this rocky area, mammal sign was scarce. Saw a few very old antelope beds near a trail on the western side of the hill. Must have been used last fall for the fecal matter was somewhat weathered. On my way back to camp I saw a shrike in the dim twilight. The bird was trying to find shelter from the cold black north wind that was blowing.

Feb 17, 1939

Phil's Schuylers were untouched and my mouse traps held one *Peromyscus eremicus* and one *Perognathus intermedius*. This latter animal is coal black and represents one of the *Pinacata* forms.

The cold black wind had sprung up early this morning and chilled us through and through so it was decided to back track to the western edge of the Malapi where we could work the lava and also the sandy desert for gophers.

Heavy clouds filled the entire horizon and gave promise of rain. 15 Mountain bluebirds were wind driven and sought shelter amongst the ocotillos on the hillside.

As we drove onto the road a pair of Western red-tailed hawks flushed from a small palo verde.

We chose a spot on the edge of the Malapi near the road. A few fairly good sized mesquite and palo verde marked a slight depression formed by rare flood waters. Heavy clouds advanced from the east and foretold early rain.

As we were pitching our tent two Border Patrolmen came in and chatted an hour or so.

A few new gopher mounds were seen near camp and Phil set 4 traps. As he was gathering grass for a plug one set captured a gopher and within an hour another was taken.

About 4 o'clock the storm broke violently and a heavy fall of hail whitened the ground like snow. Needless to say the weather was frigid and we were none too comfortable inspite of the gasoline stove which had been installed in the tent.

Phil set a long line of mouse traps in the lava this evening and picked up one more gopher at sundown.

February 18, 1939

Rain fell intermittently during the night and we filled all our pans and buckets from drainage off the truck. The old paint spoiled the water for drinking but it works well for dishes and hand washing.

The trap line held 4 *Peromyscus eremicus* and one *Neotoma albigula*, all soaking wet from last night's rain.

After breakfast Phil took a sack of gopher traps and I shouldered my shotgun. Birds were almost nil during the morning. I saw 1 Say phoebe, 2 pairs of gnatcatchers, a half dozen Gambel sparrows and 2 Sage sparrows, one of the latter was collected. A Violet-green swallow flew over camp at breakfast time.

We had no trouble setting 12 gopher traps and will without doubt catch a good series.

In mid-afternoon Phil looked over his gopher traps and found 8 specimens had been taken.

A long line of mouse traps was set through the broken lava and Malapi nearby. 6 Schuylers were set for *Dipodomys deserti* in the sand dunes north-west of camp. We looked at them about 9 p.m. and found one specimen had been taken.

Due to the rain last night a heavy dew fell at sunset though the overcast sky commenced to clear about sundown and at bed time was entirely cleared of clouds. Thermometer in truck 36° at 9 p.m.

Feb 19

Dawn found everything white with frost and the tent top sheathed in ice. The thermometer in the truck read 33°.

The mouse trap line held one black *Perognathus*, while the Schuylers were empty. But little activity had taken place in the *Dipodomys deserti* colony last night. Several holes had newly dug sand thrown out from them but the animals had



not been outside. I knew this to be true because the rains had made the sand smooth and the least touch of a small pebble thrown down would leave a plain imprint when it struck.

Two more Border Patrolmen came into camp this morning and spent one hour chatting.

Phil set 6 gopher traps nearby. After an early lunch we went south along the Malapi exploring. We found a covey of about 30 Desert quail and two pairs of Leconte thrashers. Saw several Sage sparrows and heard a Golden flicker. Phil shot a Cactus woodpecker that he found pecking on an ocotillo. We went almost to the Boundary but found no place that offered better trapping than that near camp.

We each set a long line of mouse traps through the lava and Malapai near camp. Phil's gopher traps held 6 gophers.

February 20, 1939

My line held 1 *Peromyscus eremicus* and 3 *Perognathus intermedius* (1 normal & 2 black), while Phil's line held 1 black *Per. intermedius*.

Saw a single robin flying over camp this morning. After lunch we broke camp and moved down near the crater by monument 181. We set our mouse traps in broken lava and rocky arroyos on the west face of the crater this evening. Sign was not abundant but is difficult to see on such rocky ground.

A fair-sized cave on the south-west side of the crater was well signed with *Neotoma*.

Feb 21

The lines were disappointing this morning. Phil's held 5 *Peromyscus eremicus* & 1 black *Perognathus intermedius*. All of these *Peromyscus* were caught on the sloping west side of the crater and were not in the blackest lava. Their numbers are 13812-13815 (1 destroyed).

My line ran into the rocky arroyo that drained the crater and was much more rocky than the territory Phil's line ran through. It held the tail of one *Perognathus intermedius* and two *Peromyscus eremicus*. These latter two mice (13810-13811) were much darker colored than those taken in the other line and clearly demonstrated the effect of the habitat occupied by the individuals.

After breakfast we hunted down the wash north of camp through palo verde, mesquite and ironwood with a good sprinkling of fruitea and galleta grass. Birds were scarce. Two Leconte thrashers were seen and collected. A pair of Rock wrens driven for several hundred yards through the brush. A single Sage thrasher was collected and one of a pair of verdins. A lone male phainopepla was found near an ironwood tree that was overgrown with mistletoe and held a good crop of berries.

The thrasher was in laying condition when I dissected it. Traps were set on the western slope of the crater by Phil and through the outlet gorge and into the crater by me. Several Schuylers were set for Neotoma in the lava caves near the summit.

Oddly enough these woodrats gather bushels of rocks about 1½ inches in diameter for the nests. There are so few shrubs for them to get sticks and no cactus for thorns that they resort to small rocks for something to carry.

A small myotis flew about camp this evening and a snapshot that missed frightened it away. This is the first bat seen so far.

February 22, 1939

My trap line held 1 Perog. intermedius (the one that lost its tail yesterday) and one Peromyscus. This latter mammal looks strange and may be a western record of leucopus. Phil's lines empty. The rat traps unsprung. So we packed and left for our Organ Pipe Cactus Monument job.

#### Organ Pipe Cactus National Monument

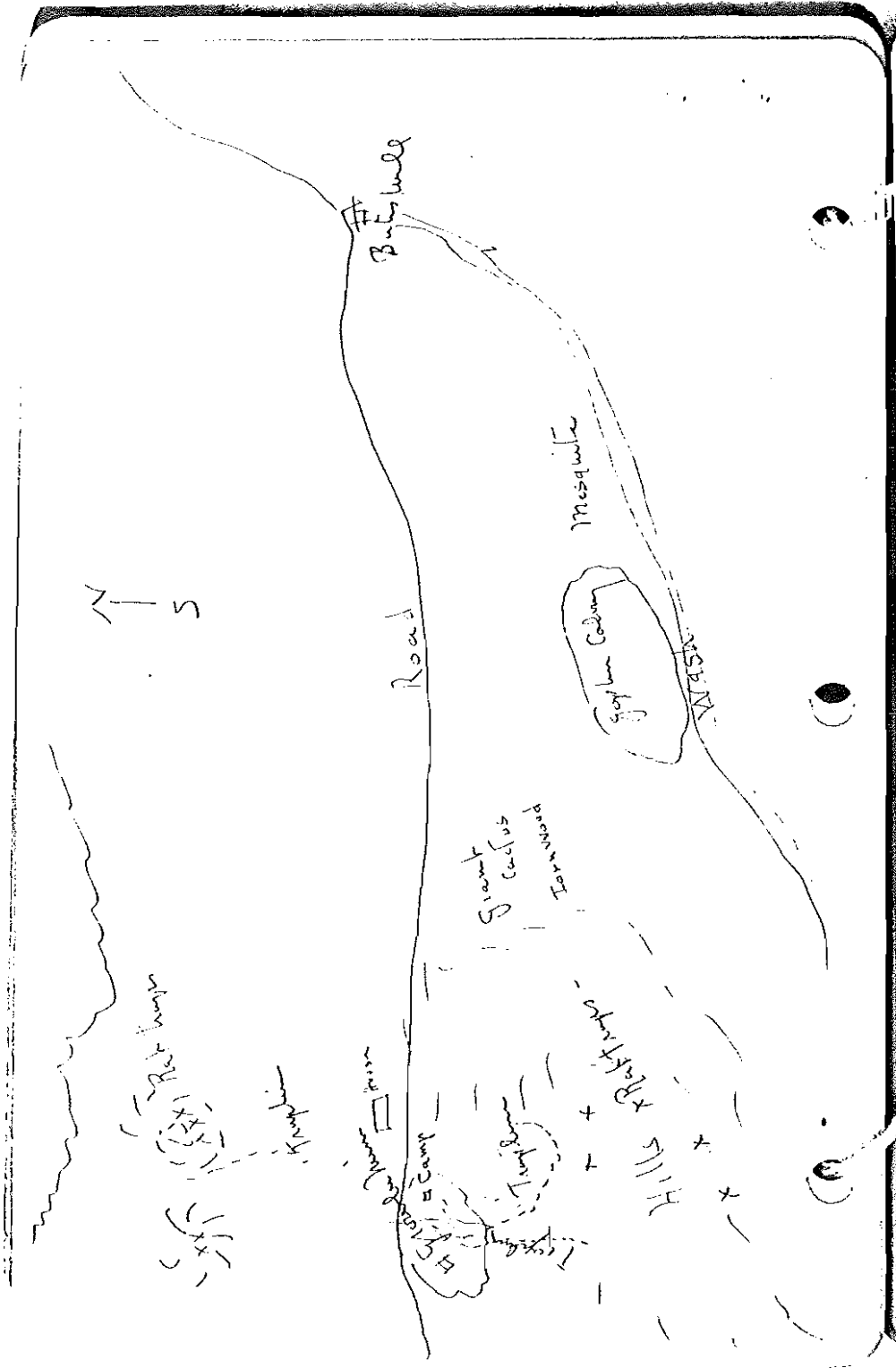
Feb 22

We left the lava beds about 10 a.m., ran the sandy gauntlet without mishap. Saw many fresh gopher mounds as we crossed, also some very fresh antelope tracks.

Arrived at Papago Well at 12:30 where we had lunch. The customs and immigration inspectors had all left, probably not more than 24 hours before as the tracks were still sharp and fresh.

Passed our old 1937 camp 7 miles east of Papago Well. The tent ditching was still well shaped and the large rocks we had used to brace the tent ropes were just as we had left them. Even the extra ironwood we had for fuel and not burned remained where we had piled it.

We arrived at Bates Well about 3 p.m. where we made the acquaintance of a Mr. Gray who with his wife has a small herd of range cattle in the surrounding hills. We made known our



mission and got permission to collect in the neighborhood. A large concrete trough full of water was the oasis for number of birds. A flock of 200 or more Western robins, 3 juncos, 5 Greenbacked goldfinches, many phainopeplas and a pair of Gila woodpeckers were all seen coming to the water. 2 juncos, 2 robins and 1 Audubon warbler were collected. The first birds seen within the monument boundary were a dozen English sparrows hopping about one old hen's coop in Mr. Gray's yard.

Made a picture on Nat. Park film pack. Mistletoe seeds dropped by birds on edge of concrete trough. Bates Well, 2-22-39, F-32-1/25 Panatomic.

Mr. Gray informed us that a few Mt. sheep lived in the rugged hills south of Bates Well and that an occasional Mt. lion was known to live in the canyons nearby. Heard a band of Desert quail while talking to him.

It was decided to make our camp at the Growle Mine which lies about 1 mile west of Bates Well and within our bounds. On our way over a lone Round-tailed ground squirrel was seen running through the creosote. Tried for shot but didn't get clear view. Farther up the road a roadrunner skipped across the flat through the cactus. Several robins near the Growle Mine and numbers of phainopeplas.

Phil set a short line of about 35 mouse traps. The line ran over rocky ground with ocotillo, cholla, palo verde and five-leaved copal.

We pitched our camp in an old corral. A water trough half full of algae covered water was the attraction of several small bats at sundown. One collected proved to be a pipistrellus. It was a relief to again have water with which we could wash our hands and faces freely and have a brimming pan full to wash our dishes with. Tomorrow it will be a bath and rid ourselves of the dusty 10 days desert with its dry camps. Then into Ajo for mail and some few needs.

February 23, 1939

Bright and clear. 7 a.m., 38°. Traps held 2 *Perognathus baileyi*, 8 *Perognathus intermedius* and 1 *Dipodomys merriami*. Numbers of Audubon warblers & robins about this morning. After getting up part of the specimens taken yesterday and in the traps this morning we cleaned up and drove into Ajo 21 miles of rough desert road to the north. Arrived back in camp after dark too late to set traps.

February 24, 1939

Clear, 7:30 a.m. 40°. I sat down to prepare the half dozen mammals left from yesterday while Phil hunted to the west and south of camp. Creosote flats with ironwood along the dry stream beds and cactus, ocotillo, sumac & copal on the rocky hillsides. He found two small bunches of Desert quail. Saw several Violet-green swallows, a pair of Cactus wrens, 1 mockingbird, pair of Sage sparrows, many Desert sparrows, small flock Gambel sparrows, pair of Palmers thrashers, 1 pair Red-shafted flickers. Collected 3 Desert sparrows, 1 Gambel sparrow, 1 Palmer thrasher, 1 robin.

In camp I shot a female Palmers thrasher from a pair that came into the trough to drink. The female's oviduct was well developed and would probably have laid within a couple of weeks. A pair of Western ravens were seen circling high in the air at noon time. In late afternoon 3 robins came into the trough.

Phil hunted lizards on the rocky hill above camp with poor returns. He set traps on the rocky hillside north of camp (south exposure) this evening. Late in the evening several bats flew about but we were unable to get a shot. During mid-afternoon I investigated a large tunnel in the nearby mine. Some bat sign was found about 40 ft from the entrance, but no bats were inhabiting the place. Evidently a resting place or a summer roost.

February 25

Traps held 4 *Dipodomys merriami*, 4 *Perognathus intermedias* and 1 *Peromyscus eremicus*. A Palmer thrasher was heard singing close to camp. The rather musical notes were pleasing to the ear and were delivered from a wide series of places. Hardly ever did the bird sing twice from the same perch. This habit was quite different from his near relative, the mockingbird who has favorite singing perches.

The lone Say's phoebe has taken up its abode near the old mine. So far but the one bird has been observed and it is probably awaiting the return of its mate on the chance of another coming in.

I hunted for an hour east of camp. Birds were scarce. I saw a White-rumped shrike and a Costa hummer and collected a male Gilded flicker. The area covered was all cactus, ironwood, palo verde association, growing on hilly rocky ground. Saw and collected 1 *Ammospermophilus harrisi*. It had a nest built of sticks and short pieces of dead ocotillo in a mining monument. A skin of a Scott gray fox was seen hanging in the old miner's cabin. It had been captured in a trap nearby last December.

Phil brought in a Cactus woodpecker, 1 Gila woodpecker, 1 mockingbird and another Palmer thrasher. He had been hunting through the giant cactus north west of camp. He saw several pairs of House finches, a pair of Cactus wrens and several Desert quail, also 1 buzzard.

Late in the afternoon he set 6 Schuylers in the rocks on top of the large hill north of camp and ran the mouse traps through the cactus ocotillo association south of camp in hopes of catching more Bailey pocket mice.

February 26 1939

Last night I heard a pair of Screech owls about camp. They were giving their characteristic tup-tup-tup-tup tup tup call that sounds much like the bouncing of a bell on a hard floor. A Great horned owl was heard hooting from the cactus belt east of camp very early this morning and coyotes yelped from several directions at the same time. At sunrise a strong north wind sprung up, cold and black and spoiled all chances of good hunting.

Phil's rat traps on the hill held 1 *Neotoma albigula* that could be made into a specimen and remnants of 1 other *albigula* and 1 *N. intermedia*, possibly *aripola*. Apparently a *bassariscus* had found the trapped mammals and feasted at our expense. The mouse line held 8 *Perognathus intermedias*. Included in the lot was the first female of this species taken so far. I cannot explain why all to date have been males unless the females heavy with pregnancy and are not active.

In spite of the wind we tried to hunt but with very poor results. I got a pair of Plumbeous gnatcatchers and a female House finch (from 2 pairs that stopped on a giant cactus). Saw a flock of Gambel sparrows (50 or more) and heard several Desert quail out in the cactus giving their single noted mating call. Saw a male Costa hummer as it whizzed past camp into the wind.

This evening Phil set 2 small steel traps in the rocks where the woodrats were taken last night and I set out a pair of coyote traps using the jackrabbit Phil had killed yesterday for bait. The animal was unfit for a specimen as the hair on its stomach was loose. The large mammary glands were brimming with milk showing the poor thing had several small young somewhere.

Phil rebaited his mouse traps on the hillside south of camp.

This evening I saw the three robins that live about the place searching for worms over the gravelly ground beneath the palo verdes nearby. They would run a little, stop, listen and run again, just as they do on wet meadows but they never seemed to find a worm nor to even act as though they heard one. I guess it was just inborn habit and they were going through the motions even on the desert. Their chief source of sustenance is mistletoe berries and they have driven out the usual population of phainopeplas from them. One or two phainos still stick and are forever being set upon by the robins when they get near the mistletoe bearing trees.

We each saw a cottontail rabbit today. Phil saw his about 1 mile east of camp and I saw one in the woods nearby.

February 27, 1939

Turned extremely cold in the early morning before dawn and sunrise found two very cold collectors. The water trough nearly had a thin coating of ice on the surface of the water.

The rat traps held 2 *Neotoma albigula*, one of which was thrown away and the mouse trap line held 2 *Perognathus intermedius*, only 1 of which was saved.

I hunted over the saddle towards Bates Well, then down the large wash below the well. I saw numerous peccary tracks that had been made just after the last rain of a week or more ago. Also several fresh gopher burrows were noticed and I resolved to set traps as soon as possible for this locality should be fruitful.

Birds were not common. I saw several pairs of Gila woodpeckers, many phainopeplas, 2 pairs of Plumbeous gnatcatchers and a pair of Palmer thrashers. This latter species seems to be well distributed over the cholla area though not abundant. I shot 1 shrike, 1 Ruby-crowned kinglet and a Nevada sage sparrow, 2 of the latter were seen.

The wash was over 75 ft wide and ran a rather straight course through a silty alluvial bottom well grown over with mesquite, palo verde and *baccarus*. There were numbers of a thorny shrub with orange seeds called *emoryi*.

Phil brought in a Costa hummer. He spent the rest of the day repairing the Ford. The fan shaft had slipped and was threatening to tear a hole in radiator with the fan blades and repair was necessary. He didn't get the job completed when trap setting time rolled around.

4 Green-backed goldfinches came into camp this afternoon. Phil set a half dozen rat traps over the rocky hill tops south of camp this evening.

February 28, 1939

Cold and clear, 28°. It was disagreeably cold. In fact frigid this morning. Ice  $\frac{1}{4}$  inch thick completely coated the trough this morning.

The rat traps on the rocky hill north of camp held a fine male specimen of *N. lepida harteri* and glad I was to get it. This species in this particular region is confined to the tops of rocky hills and are not very good nest builders. Apparently the reason is due to crowding by the more aggressive and larger species *N. albigula*. The traps on the hills south held 3 *N. albigula*.

After breakfast we took 10 gopher traps, a shovel and our guns and hiked for the gopher colony  $\frac{1}{2}$  m s.w. Bates Well. We had but little trouble in setting 10 traps all in freshly made burrows and with but a single trap to the set.

We walked on up to Bates Well for a drink. Saw the one lone junco and a single Black phoebe which was collected. The bird was catching insects over the cattle trough. Many robins and a single Audubon warbler were seen about the corral. At noon saw 1 Turkey vulture flying high overhead.

While we were at breakfast this morning I shot a flicker from the fence and at lunch an English sparrow also.

Shortly after Phil had left to pick up the gopher traps A.A. Nichol came into camp. He is doing the botanical survey of the region. We had a fine time telling tales and comparing notes. He is one of the most versatile naturalists I know and is very well acquainted with desert flora.

Of the 10 gopher traps set 8 held specimens and true to my prophesy they represented an undescribed form.

We sat up by an ironwood fire until about midnight talking of various experiences and of the region we were both so deeply interested in.

3 Screech owls kept calling back and forth in the mid-night moonlight.



March 1, 1939

A violent cold wind came up suddenly at an early hour this morning and by sunrise was about strong enough to rattle the camp. After breakfast "Nick" left for Ajo where he had an appointment with some friends from Tucson. It was arranged that should they not turn up he would return & bring us our mail. This he did at 3 p.m. and my opportunity as collaborator had been satisfied. However, the red tape of making out the report is hardly worth the \$1. per month salary I am to receive!

Six rat traps were set over a rocky capped hill and 54 mouse traps were placed along the rocky arroyo in ironwood, palo verde association.

March 2

The rat traps held two *Neotoma albigula* and the mouse traps 1 *Dipodomys merriami*, 4 *Perognathus intermedius*.

After breakfast we set out for Bates Well with our guns and 11 gopher traps. The gopher traps were set in short order in the same locality where the series of 8 were taken on Feb. 28. The beasts were still very active and each of the 11 traps was set in a freshly dug burrow.

Many quail were seen, numbers of which were paired off, others were heard calling their single noted nuptial call over the valley floor.

Gambel sparrows seemed more abundant today as several small flocks were seen. Saw fresh signs of peccary in the mesquites where they had been rooting in the lush annuals for food.

Near the well I saw a Round-tailed ground squirrel but didn't get a shot at it. Saw a number of Audubon warblers and two juncos (shot 1 of them), many robins, Gila woodpeckers, 1 Cactus woodpecker. Heard a Cactus wren singing on the hillside nearby. Shot a Sage sparrow and a Lincoln sparrow.

Phil saw an Ash-throated flycatcher when picking up his mouse traps this morning near camp and I saw a Lutescent warbler. These birds appear to be the vanguard of the migration.

Phil brought in the gopher traps this evening and to my surprise only 3 gophers had been taken. I resolved to make one more try for more.

March 3, 1939

The rat traps on the hills held 1 *Neotoma albigula* and 1 *Perognathus intermedius*, neither were saved.

We set out early with truck bound for Ajo for few needed supplies before leaving for Quitovaquita.

While Phil set out the gopher traps I explored giant cactus for owls. I chopped out about 15 fairly good holes without results and found the ladder was at least 10 ft too short. Saw a nice adult Red-tailed hawk, the first one seen in the O.P.C.N.M. so far (near Bates Well). Drove into Ajo and arrived in camp at sundown.

The gopher traps held but 2 specimens, 1 male and 1 female. This latter animal contained 15 foete, all were of equal size (15 mm). This animal had apparently had young earlier for the fur about the mammae had been replaced since the fall shedding. The presence of 12 embryos presented a problem. How could she nurse 12 young with 8 teats?

Heard poorwills and a Horned owl during the night. Robins are still about at both Growle Mine and Bates Well.

March 4

The rat traps on the hill which had been set for the past several days in hopes of catching another *N. l. hartei* were picked up this morning. They held 1 large male *Neotoma albigula* and 2 *Peromyscus eremicus*.

We broke camp and left for Quitovaquito this morning. Our route lay west through the pass - a distance of about 1½ miles thence south skirting the western slopes of the Bates Mountains in Growley valley. Many large washes were crossed - palo verde, ironwood & mesquite with lots of fruitea where the ground was soft, lined the bottoms, while vast expanses of creosote covered plains stretched to the westward and covered the floor of Growley Valley.

Several places were seen where *Dipodomys deserti* might be found but no actual burrows were seen. A Red-tailed hawk was seen about 2½ miles north of El Poco Well and a rather bulky nest of sticks was seen cradled in the branching arms of a giant cactus nearby. I stopped the truck and we walked over to examine it. Apparently uninhabited so far but might possibly be used later as the presence of the hawk was evidence of such intentions. On our way back to the machine I found where several Antelope had been bedded down for the night. There were six spots in a dry dusty bar of silt well away from all vegetation. Fresh fecal matter, still wet, gave proof of recent occupancy.

Mr. and Mrs. Gray reported seeing two very tame antelope in this sector when they came up from their cattle ranch near Quitovaquita on March 1st and no doubt this was the bedding ground of the same animals.

Near El Pozo Well, which was a brush corral, an old caved-in well and the remains of a couple of Indian Wickiups, 2 Sage thrashers and a Coopers hawk were seen. A pair of ravens flew from the corral as we drove up and a Rock wren was seen in one of the old Indian Wickiups. Farther up the wash a small flock (a dozen or more) of Desert sparrows and 2 Rock wrens were seen. This flocking habit of Desert sparrows is not uncommon in my experience and is often seen during the winter season. Numerous bunches of Gambel sparrows were noticed along the washes we crossed but the bad road took the greater part of my attention and observations were secondary. In the wheel tracks I saw the tracks of coyote and kit fox in several places.

It was interesting to note how well placed the giant cactus zone was. It seemed to cling to the rocky slopes of the hills and only occasionally did a group of the cacti find rooting ground in the flatter alluvial soil on the valley floor.

We arrived at Quitovaquita about 2 p.m. and found an old Papago Indian with his squaw and small daughter occupying two adobe huts. Several alkaline springs flowed into a reservoir of perhaps half an acre in size which was nearly full of water. Birds were abundant. 4 (2 pairs) Pintail ducks, 6 (3 pairs) Greenwinged teal, 2 (1 pr) Cinnamon teal and 2 (1 pr) shearwaters were swimming about and a dozen Least sandpipers - later documented to be Solitary sandpipers. 2 Wilson snipe were probing the mud for food. Rough-winged, Tree and Violet-green swallows were coursing the surface of the pond for insects. Numbers of English sparrows were about the trees near the adobe huts.

Two Black phoebes and a brilliant Vermilion flycatcher (male) were perched on weed stems near the pond.

Several Savannah sparrows and a number of Lincoln sparrows were seen in the dead weeds near the springs. Costa hummers were numerous, all feeding on a species of heavy leafed fruitea that was covered with deep purple blossoms.

Several small fields lay below this reservoir each surrounded with a brush fence. Typically Mexican. Bordering the ditches were fig, peach and apricot trees planted at random and a small section planted to grapes and pomegranates. A growing field of wheat was on the hillside and about 4 inches high. As I passed a Crissal thrasher ducked into the brushy fence and was seen no more tho I heard a chirp occasionally as he

fled and I followed. It was very evident he recognized an enemy and had his eye on me.

We found what seemed to be a good camp site about 250 yards south of the fields on a small knoll that was rocky yet smooth and clean. The tent was pitched and I left Phil to fix cots and get established while I went hunting up by the pond.

Shortly I heard a car and from a distance saw a red-colored "Pick-up" truck stop near camp. The two occupants got out and looked at our camp though they didn't go over to it. I had some trepidations though thought little of it until they drove up to the hill about 1/6 mile away to a monument. The U.S.-Mexican Boundary. This had entirely escaped our eyes and we had inadvertently placed our camp on the Mexican side! The Reales lined up the camp and the monument then drove westward as fast as they could. My hunt ended then and there. I had three birds, 1 male Red-winged blackbird, 1 House wren and 1 very dark Savannah sparrow. We broke camp hastily, luckily Phil had done no more than separate his sleeping bag and moved up onto a hill a hundred yards north west of Monument 172 - safe in the USA!

The region around Quitavaquita is mesquite - palo verde-giant cactus association with several kinds of salt tolerant shrubs growing about the spring area. A range of low rounded rocky hills rose east of the springs in which are numerous giant and organ pipe cactus with a sprinkling of palo verde. All lower Sonoran zone.

A mockingbird in full song serenaded his mate and indirectly us until almost dark.

The weather turned cold after the sunset and a camp fire proved extremely comfortable. A full moon rose directly after sunset filling the landscape with a softened light, beautiful to see. A Horned owl and several poorwills were heard later after we had gone to bed and early before dawn coyotes were heard in several directions.

March 5, 1939

Phil had set about 3 dozen mouse traps over the rocky hill and this morning but a single *Peromyscus eremicus* had been taken.

After breakfast he went hunting while I sat down to write and skin. A pair of ravens haunt the place but never get within gun range. A lone Great blue heron was seen leaving the pond shortly after sunrise this morning and quail were heard calling from the mesquites just below the boundary - though there is but little doubt that they water at the pond.

Near camp I shot 1 Nevada sage and 1 Brewer sparrow with 1 shot. They were in a mixed flock of the two species and feeding, eating petals on the purple blossoms of the large leafed fruitella.

Phil went hunting after breakfast. His route led up a mesquite filled wash that was north from the boundary and lies east of the low hills near camp. He found a Crissal thrasher's nest with 1 egg. The nest was a frail affair on a horizontal limb of a large mesquite tree that overhung the sandy wash. The incubating bird had a wide view to the north, south & east and was exceedingly shy.

Down the was a mile and near camp he killed a male Crissal thrasher. The hunt resulted in 1 male Cactus woodpecker, 1 female kinglet, 1 Brown sparrow and a verdin.

After lunch he went out with the 22 popping lizards. He collected a number most of which were out of mesquite trees. He brought in another kinglet and 3 Myotis. These bats he found under a granite flake situated on the bank of a wash, 8 ft above the bed. ~~The bats were found in a hole in the granite flake~~. The run was in vertical position about 14" long, 1½" wide and the bats were 10" from the opening. He was attracted first by the squeaking. A line of mouse traps were strung over the rocky hill again this evening.

After dinner poorwills were again heard. At least 3 individuals were present. We stalked them several times but the bright full moon and slight breeze seemed to work against us. After several tries I succeeded in getting the reflection of a pair of eyes on the rocky hillside and was able to get within gun range. It proved to be an extremely dark example of *P. nuttalli*. The two remaining poorwills were stalked several times but without results. They seemed to have a defined range from which they called and each time we pursuit them they made their exit. It was when they returned to the hillside that we tried to stalk. The male shot had a deeper voice than the other two so I believe he was the older of two males and 1 female.

While after the poorwills we disturbed a male Costa hummer from his roost in a palo verde. By shining the flashlight on him he managed to get on a level branch but the moonlight was too bright for us to catch him and he finally flew off.

March 6, 1939

Clear, no wind. 34° at 7:30. The mouse traps held 3 *Peromyscus eremicus* and 5 *Perognathus intermedius*, not all were saved.

Went hunting this morning around the Indian's pond and wheat field. 16 Cinnamon teal, 2 Shoveler and 3 Baldpate ducks were on the pond and flew up as I came near. In the field I saw 2 Mourning doves, 3 killdeers and a dozen or more Western lark sparrows.

About the spring I saw several Brewer sparrows, several Lincoln sparrows and a single Cooper hawk.

About 200 Black vultures were seen circling over the rocky hills then taking a direct northerly course and disappeared. Their identity was confirmed by their extremely short tails, though they were too far away to see the light spots under each wing. A pair of Sparrow hawks (very shy) live in the giant cactus above the springs and have been seen several times.

Phil returned to camp about 1 p.m. tired and with an almost empty game bag. He had killed 1 Ammospermophilus and 1 Tree swallow in a hike that took him to Mon. 173 over 5 miles to the westward. He did see an Allens jackrabbit and a Desert jackrabbit. He shot at the Allens but it was too far away by the time he had replaced a light charge of shot with a heavy one.

About sunset we went down to the spring near the Papago's house for water. A Greater yellowlegs flushed from the pond. several Least sandpipers and 3 Wilson snipe were present. A dozen or more killdeer were running about on the grassy bank left bare by the partial draining of the pond. The old Indian had spent the whole day irrigating his wheat and was now lying on his back on the ground near his house.

Several Green-winged and Cinnamon teal were paddling around the shallow water. The lone male Vermilion was seen and a small number of Audubon warblers were making aerial sallies out over the surface of the water for gnats. Two Black phoebes were still present and a number of English sparrows.

Towards dusk a number of Turkey vultures came into the mesquite just below the border to roost. Phil set a line of mouse traps in the sparcley brush and cactus covered slope about camp.

Heard both poorwills and Horned owls during the night.

March 7, 1939

Traps held 4 D. merriami, one a very small young one. I hunted down by the pond and fields again this morning. A small flock of Vesper sparrows, 6 W. lark sparrows, Cinnamon and Green-winged teal (10), 3 baldpates and 5 Wilson snipes. 1 lone coot came in during the night and kept on the opposite side of the pond from me.

I talked to the Indian a short time this morning and he told me that the "grande baile" with the "blanco" hips was present though not abundant.

Several cottonwood trees scattered over this place showed much evidence of sapsuckers. Their evenly spread punctures thickly marred both the older trunks and newer limbs, proving that these birds are regular visitors during winter time. Saw a number of Desert quail and watched a Crissal thrasher singing from his post on top of a mesquite. His voice was not unlike that of a mockingbird in tone quality but while it was not a regular song repeated over and over it lacked the mimic qualities of the mockingbird. However it is quite as enjoyable and decidedly pleasing to listen to.

Costa hummers are abundant. Saw a female tugging at a piece of cloth in a mesquite tree this morning. It finally shredded out a bill full and whizzed out of sight across the field.

Numbers of Turkey vultures about today. On my way to camp I shot a Marsh wren near the spring. 2 others were seen. Lincoln sparrows and Gambel sparrows still present in numbers.

Phil went hunting in the wash on the east side of the hills from camp. He went out beyond the line of ironwood and mesquites that bordered the streambed and in some moderately alluvial ground found a number of Dipo. deserti colonies.

On his return trip to camp he shot an Ash-throated fly-catcher. Saw many phainopeplas. He set a line of mouse traps and 19 Schuyler rat traps in the deserti localities later.

About 3 p.m. Mr. Nichol came in and we had another of those most pleasant evenings by the camp fire.

About 10 p.m. we all went over Phil's trap lines. 2 Dipo. deserti and 2 Dipodomys merriami were taken from the traps.

March 8, 1939

The rat and mouse traps held 1 more D. deserti and 6 more D. merriami.

I went hunting across the pond and fields this morning. The coot, baldpate and Teal ducks were still present tho only 2 of the Wilson snipe remained. Six Least sandpipers were probing the mud with their tiny bills.

Seven robins, 4 Meadow larks (1 collected), 3 W. Lark sparrows, several mourning doves, many Gambel sparrows, 6 killdeer, plovers, 1 Vermilion flycatcher - male. 1 pair of Say phoebe, 1 pr Black phoebe, many English sparrows, 1 shrike (collected), many Gambel quail (paired), several Audubon warblers.

Near camp a thrasher (Crissal) and a mockingbird were singing in the same general vicinity. At times it was hard to distinguish between them. However the mocker had the greater range of high and low notes and was a great mimic while the thrasher, whose song was decidedly pleasing, did not have the imitated bird calls and did have a great deal of thrasher song.

"Nick" took Phil in his car and drove to the spring 1 mile north and then up to Mon. 173 in hopes of seeing an Antelope jackrabbit. No luck on the jackrabbit but Phil did bring in a Gila woodpecker, 1 shrike and 1 Say phoebe. The latter bird was laying and had an egg in her oviduct. Phil said he found the nest. It was located about 10 ft down from the surface in a well and was on a ledge of the concrete casing in plain sight from above.

The two shrikes brought in today were interesting. One was in breeding condition with gonads almost  $3/8$ " in length while the other's were barely visible. Evidently the latter was a migrant.

Phil caught a number of small fish in the pond this afternoon with the butterfly net. These fish turn blue at times and seem to be a very interesting species.

8 rat traps were placed in the rocks on the hilltop above camp for *Neotoma* this evening.

At sunset the first Texan night hawk was seen flying over the pond - too far for a shot.

Had another very enjoyable evening with a genial camp companion, "Nickel". He had spent the day getting plant specimens about the place,

March 9, 1939

Partially overcast. The rat traps held 6 *Neotoma albigula* (4 saved).

Our observations of this place were over for the time being so we packed up and left for Alamo canyon in the Ajo mts. about 10 a.m. We drove down to the Papago's house. His name is Jose Juan and spent a few minutes chatting with him. As we pulled out and almost on the International line a Round-tailed ground squirrel was pointed out to us by Nick who had seen it run across the road.

After doubling back up the wash toward the north a lone robin was seen.

Our route led north east towards the southern side of the rugged mountains that had stood out so prominently from our Growley mine camp.

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After we crossed about 5 miles of cactus covered plain we came to Grays' new well. They were working on a corral and had a trough full of clear water. The surrounding region was well wooded with large mesquites and palo verdes and looks like an excellent collecting locality. They call this place "Pozo Bonit". I suppose it will eventually be "Pozo Bonito" as "Pretty Well", a rather well applied name. A pair of Golden eagles were seen soaring over the nearby hills.

The route led up a big wash skirting a low saddle at the north end of the Puerto Blanco Mts. The road proved to be but little used and was rough and steep in places. Fresh gopher work was seen near the saddle and would make a good stop for mammal collecting tho no water is to be had for camp purposes.

Had lunch at the summit and spent an hour looking the region over. An almost dense stand of palo verde interspersed with giant cactus looked very much like some places I had seen in Sonora, Mexico.

Far across the plain to the eastward lay the rugged Ajo range - our destination. "Nick" was leader and we followed over trails and single wheel marks that hadn't been used for years. This wide plain was covered with mesquite and ironwood along the washes with creosote over the deeper parts and the soil was of a rather alluvial silty character.

Many signs of *Dipodomys merriami* were seen and one Antelope ground squirrel tho life was not abundant.

Just before we reached the main Sonoyta highway several large holes were seen that looked like *Dipodomys deserti* tho not certain.

Reaching this main road we were in an almost different land. Flowers were blooming in profusion, poppies, lupines and several others amid a great forest of giant cacti and cactus of several other species. Palo verde - ironwood etc.

A few miles of highway passed quickly and again we turned uphill over an alluvial fan towards the now nearby Ajo Mts. The rock studded road was rough and the change of character of the region due to rising altitude was evident. Several mounds of large kangaroo rats' burrows were seen and these looked much like Bannertail kangaroo burrows. The giant cactus belt was here found to be at its best and several species of cacti not noted before were found growing. 4½ miles brought us to the end of the road. A lone adobe two room shack was situated on a high bank above a trickle of alga filled water in a rocky streambed. Great cliffs of ragged rock loomed on three sides of the narrow canyon and the slope that faced south was dotted clear to the summit with great clumps of Organ Pipe cactus.

We pitched our tent on a sloping span of rocky soil that was but barely large enough for a camp.

Numbers of Violet-green swallows were coursing to and fro through the canyon. A pair of Red-tailed hawks and a raven flew past.

A blustering cold wind blew first up then down the canyon chilling us through and through.

Nick went back down the canyon for a load of wood while Phil and I got settled. Shortly before sundown Phil set a line of mouse traps through the rocks and brush near camp.

The day ended with a gorgeous sunset of gold and crimson. In the early evening a Screech owl and Horned owl were heard calling nearby.

March 10, 1939

Few clouds to westward. The wind during the night reached a high velocity and threatened to level the tent but fortunately the pegs held. Nick packed up and left about 10 a.m. The mouse traps held 1 *Perognathus baileyi*, 7 *Perognathus intermedius* and 3 *Peromyscus eremicus*.

We hunted up the canyon, saw 4 Audubon warblers, 1 Golden eagle and 1 Arizona cardinal, male. Shot a Red-backed junco that was found by itself near the creek.

Several old Cactus wrens' nests and a few Palmer thrashers' were found in several cholla plants.

The vegetation of the creek bottom was surprisingly interesting. Oaks of fairly large size, junipers and jojobas were found giving indication of good upper Sonoran zone.

I found a limb of an oak where a Sharp-shinned hawk had recently eaten a small bird and it was covered with feathers. While examining this spot I saw the bright red flash of the cardinal. Costa hummers are abundant.

The weather thickened and several sharp showers fell about noon. It cleared slightly after 2 p.m. and Phil went hunting up the canyon above the well. An hour later he returned with 1 Shufeldts junco and 1 Audubon warbler. He had seen nothing of the cardinal tho he hunted for it carefully.

Traps were set over the rocky south exposed slope again this evening.

At sundown the clouds had almost disappeared and a calm cold temperature had settled down.

The lantern was lighted and I put up several specimens before going to bed. The owls were not heard during the night.

March 11, 1939

The traps held a short catch this morning, 1 *Perog. baileyi*, 1 *Peromyscus eremicus* and 2 *Perognathus intermedius*, again the latter were both males. This is becoming a rather peculiar event of regular occurrence. Where are the females?

I went hunting up the creek this morning and as I was making up my pack a Bullock oriole, male, alighted within gun range of camp and was shot. The first of this species taken. Coincidental, it seemed to have the vanguard of the summer migrants meet the juncos which represent those from the mountain climes.

A pair of Canyon towhees were taken as I left camp and farther along near the corral a lone kinglet. Another was seen farther along.

A singing Palmer thrasher was taken with regret. Some day there must come the reckoning and I'll certainly have this one to answer for.

I heard a Cactus wren singing. So far this species has eluded our collecting efforts. However, they are decidedly scarce this season, ordinarily in this type of habitat they would be abundant.

Phil hunted down the creek and out onto the flats at the north of the canyon. He killed a pair of Canyon towhees, a Gambel sparrow (from small flock), a pair of verdins (mated), a Cactus woodpecker, 1 Gilded flicker. Saw several pairs. Saw a number of Desert quail and found a Palmers thrasher's nest. It was situated in a cholla and held 3 fresh eggs.

12 Schuylers were set on the ridge above camp this evening. Rat sign was fairly abundant.

35 mouse traps were set along the creek bed amongst the mesquites.

While eating dinner just after dark a Screech owl was heard calling from the mesquites along the arroyo. Phil took the gun and I took the flashlight and went in pursuit. I imitated his whistle and brought him across the creek to us. Suddenly the bird was heard very close, which indeed was the fact, for it was perched on a limb of a mesquite not 10ft away, far too close to shoot at but a beautiful sight in the beam of the spotlight. Phil backed up to shoot but the motion frightened the owl and it fled across the creek bed. It kept calling but we could not be certain enough to shoot nor could I

catch the reflection of its eyes in the lamp.

March 12, 1939

The rat traps held 2 *Neotoma* & 1 *Peromyscus*. The *Neotoma* were 1 *N. albigula* and 1 extra large female *lepida*? probably a new form.

The mouse traps held 2 *Peromyscus eremicus* and 1 *Perognathus formosus*.

While cooking breakfast 2 Mourning doves, evidently a pair, alighted within 5 ft of me and almost in the tent. They didn't stay long but flew to a nearby rock 20 ft away where they sat for half an hour while I carried on my duties of preparing the meal. Apparently the birds were used to the proximity of humans.

We both hunted down the creek and onto the flats near the mouth of the canyon. In fact it was over almost the same route Phil went yesterday.

I saw a male cardinal but far too wild for a shot. Many Desert quail, many Desert sparrows, Rock wrens, many phainopeplas, Costa hummers, 2 pairs of Gila woodpeckers. several House finches (1 shot). Phil shot a male Sparrow hawk. Saw a Coopers hawk circling high above the wash. Looked at the thrashers' nest we had found yesterday. Trimmed it up a bit for photographing. Bird didn't much like it but went back and sat after a half hour's deliberating.

As I rested a few minutes on the edge of the arroyo I saw a Rock squirrel on the other side of the creek too far away to shoot at. These animals too seem to be extremely scarce and of course shy as always.

On the way to camp I shot a junco on the rocky hillside. At first sight I thought it was a Desert sparrow indeed it was so far out of its usual environment.

After lunch Phil went hunting up the creek. A short distance above the windmill he saw the male cardinal. The bird was hopping about in a dense shrub and after a moment's pause came up into the more open oak tree where he shot it. Returning to camp he shot a Lincoln sparrow and saw a Slate-blue junco which I took to be *J. hyemalis*.

Lizards were out abundantly today so he took out the lizard gun hunting reptiles. He wasn't gone long and soon came into camp breathless with haste and excitement. He had found a Screech owl peering out of its hole high up in a

giant cactus. On our way up to the owl nest I flushed a Palmer thrasher from her nest which held 3 eggs, near the corral. A good one for photographing.

We returned to the spot which was in the top of a straight columnar cactus, about 20 ft high growing on the rocky side hill south of the windmill.

As we came up the owl stuck its head out of the hole. It appeared as tho it might fly so I shot it with the auxillary. The cactus proved to be too tall for the ladder so we cut it down. Phil was first attracted by the owl calling. This at 4 p.m. in broad daylight. This capture capped the climax for a perfect day.

A line of mouse traps were set down the rocky arroyo near the creek bed in the mesquite association again this evening.

Horned owls hooted from both sides of the canyon this evening and kept it up until we fell asleep in our beds. I tried before retiring to catch the shine of the eyes with the big spot light on the car and the flashlight but no luck. It is possible that owls shut their eyes when lights are turned onto them. However, this did not frighten the hooters as they kept it up from the same places on the mountain sides.

March 13, 1939

The mouse traps held a single *Peromyscus eremicus*, female. The animal had 2 large grubs on her rump, one on either side of her tail. This must have been decidedly painful to the poor critter.

The rat traps held a single *Neotoma stephensi* and a *Perognathus intermedius* (male again!). The latter was not saved. Picked the traps up.

The day lightly overcast. Went up to the thrasher's nest by the corral with my graphic. Secured several shots during 2 hours. Bird not shy but light not the best so will try again under better conditions.

We hunted a distance up the creek. Birds very scarce, that is the species we desire to shoot. There are several pairs of nesting flickers, Desert sparrows, Palmers thrashers and phainopeplas but I do not wish to kill them.

Phil did get the Slate-colored junco and a male Costa hummer.

The weather thickened and it seemed almost sure to rain this evening. "Nick" came about sundown, cheerful as usual and always a welcome companion. He invited and we accepted an invitation to a delicious steak dinner and afterwards a camp fire with tales of natural history and adventure that made for keen friendship.

Phil set 9 rat traps on the south side of the canyon this evening (north exposure).

Saw some bats flying this evening but a chance shot failed to kill.

No mice traps out tonight. Horned owls started hooting about 4 this afternoon. They seemed to be located in some high cliffs on the south side of the canyon. Probably the cloudy day had some bearing on the early hooting.

March 14, 1939

Phil heard chuckawalla lizards in the rocks while hunting today. The sun is warming things up a bit now and these reptiles are beginning to be active.

The rat traps held 4 *N. stephensi* and no *N. albigula*. This was evidence of the effect of slope exposure. The *stephensi* being an upper Sonoran species finding their greatest abundance north near the Bill Williams river and extending southward, thus preferring the cooler slopes. While *albigula* is a Lower Sonoran species, finding its most normal habitat on the hot cactus covered desert. This being a more adaptable to the south exposure which was warmer. The two slopes were also different in the plant life. The south face was covered with Organ pipe, giant and a few other small cacti with palo verde, encelia and sage. While the north face (on south side of canyon) was clothed with shrubs. Some few chollas and no organ pipes and but very few giants. The common shrubs were jojoba, mesquite (shrub), fruitilla and others I do not know.

Nick went botanizing up the creek while Phil followed with his shotgun. I set up the Gov. kodac and my graphic at the thrasher's nest as the sun shone beautifully this morning, with a slight breeze and no clouds. Worked photos til noon.

Phil brought in 1 male phainopepla, 1 Ash-throated flycatcher, 1 Ruby c. kinglet and another male cardinal. He saw a Rufous hummer, male, and 1 male Green-backed goldfinch.

Nick saw Golden eagle.

Two ravens about camp at noon and several pairs of linnets were flying up the canyon.

During the afternoon a roadrunner started "cuck cuck cucking" on the mountainside north of camp. This is the third day now that this bird has been singing (if it can be so called) from the hillside and is probably intending to nest in some of the organ pipes.

As I was skinning specimens this afternoon a humming bird (Costa) dashed into the tent and out again. It came right up to the red cardinal that was lying on the table and must have thought it to have been a red flower.

Phil went out with Nick onto the flat beyond the canyon mouth this afternoon. He brought back a pair of gnatcatchers which were taken in Alamo Canyon on the way to camp.

Mouse traps were set on the hillside south of camp (north slope) this evening.

Saw 2 pipistrellis flying about this evening at sunset. Nick shot at them with my 38 shotgun but failed to hit.

March 15, 1939

Mouse traps held 5 *Perognathus intermedius* and 3 *Peromyscus eremicus*. The rat traps 1 *Ammospermophilus harrisi* and 1 *Neotoma stephensi*. Again all five of the *Perognathus* were males. I cannot understand this phenomenon and adding to the puzzle is the fact that not a single *Peromyscus maniculatus* has been taken. Ordinarily this species is too abundant. Possibly there has been a plague for rabbits are scarce, in fact Mr. Nichol is the only one of the three of us to have seen a rabbit near this camp. He saw a lone jackrabbit near the main highway and the intersection of this (Alamo) canyon road on the day he came in.

Two Lutescent warblers were taken in the creosote near camp this morning. I worked til noon with the thrashers, had lots of fun getting them into the right position for photographing.

Birds were scarce. Phil hunted up the creek but saw nothing that was desirable to shoot. He saw numerous Rock wrens, 2 kinglets, 1 pair Plumbeous gnatcatchers, 1 Cactus woodpecker. Heard Canyon wren and Cactus wren.

As I photographed the thrasher I saw a beautiful pair of Golden eagles circling above the cliffs on the north side of the canyon. A male and female Costa hummer feed constantly in the environs of the thrasher's nest. The scope of their territory is a circle of perhaps a hundred fifty feet in diameter. This they guard carefully not allowing any of the other hummers to come in.

Saw 2 Lincoln sparrows near the canal and watched an Audubon warbler make aerial sallies from different nearby tree tops.

As I waited for the thrasher to act I saw with my binoculars a pair of flickers working on their new nesting hole in a giant cactus far up the hillside and a Cactus wren was heard

in almost continuous song in the same section. This latter species is decidedly scarce this season.

Phil went lizard shooting after lunch and brought in the first pair of chuckawallas. They were found in the usual place - a rock crevice. I have seen several broken Desert tortoise shells about the canyon and Phil brought in a tiny dried shell that measured 45x55 mm. It was found near a large dyke of rock and had probably fallen victim to woodrats.

He also killed a Townsend's Solitaire, the first for the monument.

About 4:30 we leveled the load in the truck and drove out of the canyon into the valley to set traps.

Numerous large Dipodomys burrows had been seen near Copper Mt. as we came in and these were the object of our trapping. Numerous burrows were found, in fact I would say they were abundant and we had no trouble setting out 19 Schuyler traps. A mouse line was placed nearby. It was set in rocky semi-malape ground. The region is well clothed in desert growth. Sage, creosote, palo verde, ironwood, other bushes and mesa with an abundant growth of large mesquite and palo verde along the washes. Ocotillo scattered here and there. The more usual cacti were abundant. Barrel with several species of cholla and flat leaf.

Back to camp after dark with a cold brisk wind to cook supper in.



March 16, 1939

Out very early this morning, stars still were shining when I started the truck bound for our rat traps near Copper Mt. about 6 miles away. Seven banner-tailed kangaroo rats were the reward of setting rat traps. 2 were adults, both with damaged skulls and 5 were well grown young. Later when I opened the female she was found to be pregnant. This seems to indicate a second breeding period. I am informed that for the past several years there has been considerable drought in this area and with the present exceptionally verdant conditions the small mammals are trying to build up the population again.

The mouse line hardly supported the above theory, however, for only a single male *Dipodomys merriami* and the tail of a *Perognathus* (probably *intermedias* as it was bicolored and tufted ) were taken in a 60 trap line.

Nick left after breakfast this morning bound for Tucson and Phoenix. Hopes to join us again next week near Sonoita.

The day was another of those hot calm desert spring days that make the flies buzz in the tent until your nerves are wracked and saps the life out of a fat rat catcher. After the skins were up we bathed in the algae covered pool, refreshing is the best I could say for it but made life a little more worth while. Phil hunted this morning but found nothing. Saw the pair of cardinals and Canton towhees up the canyon. They were both very tame and were decidedly interested in trying to find nest sites. He saw another Rufous hummer but did not get a shot.

A Lincoln sparrow came into the ironwood near camp and acted so wrenlike that I shot it.

About 4 this afternoon we put our stove and a can of water in the truck and drove to Copper Mt. where the rat traps were set again and another long line of mouse traps.

Looked the mouse traps over by lantern light and found the first *Perognathus* amplus for the trip and a large adult *P. baileyi*. This at 11 p.m. almost midnight - dark night, no moon.

I put my flash light outfit up at a Dipo hole in hopes of a flash of a bannertail.

We made camp nearby and hoped that the flash would be sprung several times during the evening.

Several small bats were seen in the evening and a pair of poorwills kept us searching about with the flash lights during supper time with no luck.

After supper and the lantern had been lighted. They came again and we tried to shine them but no luck. A couple of new kangaroo rat holes were found on this trip and we returned for steel traps.

Three Schuylers and 2 steels were placed and hearing a Screech owl tup tup tuping not far away we tried our luck on him. I had only my little 38 shotgun and later regretted the fact.

The first owl heard was approached and seen perched in the lower limbs of a small palo verde near a wash. They do not respond to shining as poorwills do and but seldom is a reflection of their eyes seen. However, they seem to stay perched rather well and we got this one with but little trouble. Another one was heard in a wash several hundred yards on and we tried for him. He was found easily enough but the shot was taken at too great a distance. The bird was hit but we didn't get it. Tough luck. The 410 would have been lethal.

As we were setting our five traps a bannertail ran into a tunneled bush and down a hole while preparing the trap. Out he came and we caught him with our lights. They seem to be more easily blinded by light than other kangaroo rats I have had experience with.

Later, 11 p.m. when we were ready to leave we drove to the end of the rat trap line to look the line over. A bannertail was seen in the wheel tracks much blinded by the car's light. Phil hopped out with his flashlight and after a sprightly dash through the brush caught it. That made two "hand captured" ones for the evening. Beats trapping!

During the day a round-tailed ground squirrel got into an unsprung Schuyler.

On our way back one of the steel traps held another fine adult.

The flashlight camera was a flop. Nothing happened during the evening.

March 17 1939

St. Patrick's Day in the Morning!

Out by starlight again this morning. The camera was unsprung, didn't like the bait I guess though a light sprinkle of bird seed hadn't been picked up.

The rat traps held 1 adult and a leg and tail of a young bannertail. A fox or coyote had taken the rest of it.

The mouse line held 5 more amplus and another baileyi. I guess these w<sup>x</sup>m days are bringing out the Perogn. They certainly smell mushy, in fact the odor is decidedly disagreeable and resembles the odor of house mice. I dislike this smell even more than skunk and is very much of a deterrant to ones enthusiasm in collecting the species.

Saw several Mearns flickers this morning.

In passing I must record the beautiful display of spring flowers in this section. Poppies, lupins, phacelia and many others growing in and around the cactus turning the landscape into a riot of color. It seems difficult to believe that such an arid sun scorched region could take on such a coat of color. But wait, it lasts only a short time then the baking sunshine will tan our hides!

Back to camp as the sun crept down the canyon. No wind and the prospects of a hot day are very evident, I had only started my work when I heard a strange bird call outside. It proved to be another male Bullocks oriole which I shot. The Desert sparrows about camp are industriously looking for a suitable nest site. Reminds me of humans searching for a house to rent! In a way we all have resemblances in our actions.

The roadrunner keeps calling, first from one hillside than the other. I mocked him a number of times this morning and caused him to answer again and again. I doubt very much whether he was fooled into thinking it was another roadrunner but it did make him stay longer in our place. He usually got up into a small palo verde or a horizontal arm of a giant cactus to call. Probably this also seemed as a vantage post.

Phil brought in 2 more juncos which he killed by the corral and a male Rufus hummer. He saw another of the latter species.

The day was indeed hot with but little wind and the work seemed to drag badly. However, I got up 18 specimens by 4 in the afternoon and then we packed up and left just as the sun sank into the west.

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We drove to the vicinity of Copper Mt. when a poorwill flushed from the wheel tracks in the road. Tried to follow but no luck. Listened for Screech owls but again no luck.

Reaching the main Sonoita highway we turned south searching with our car spotlight for possible poorwills by the roadside, with an occasional stop to listen for owls. Good fortune had passed us by for only one wild poorwill was seen at a point about 8 miles down the valley from the Alamo canyon intersection. A badger was seen by the roadside. Phil jumped out and shot at him twice with #9 skeet loads neither of which were fatal to the beast though he was badly peppered. We returned to a crossroad about 4 miles north of Copper Mt. where we pulled off the main highway a 1/3 mile and camped for the rest of the night. It was about 11 p.m. when we finally turned in.

A short line (30 traps) of mouse traps were set through creosote over silty and malapai ground. Caught a *Dipodomys merriami* with our lights but let him escape later when playing with him. The beast was put in a snake sack and a few pinches of bait dropped in beside him. This he soon put in his pockets. Incarceration didn't count when food was in sight!

March 18, 1939

A mockingbird sang all during the night from a singing perch a few hundred feet from camp and coyotes were heard yelping in several directions during the early hours before dawn.

The traps held 1 *Perognathus amplus* and 3 *Dipodomys merriami*.

Birds were abundant at this place. Quail were heard calling their single noted nuptial song. Flickers were heard and seen chirruping from the surrounding giant cactus. Male phainopeplas (numbers of them) were seen spiraling in the air (characteristic of nuptial flights). A pair of Plumbeous gnatcatchers chee cheed about the brush nearby. In fact almost all the resident desert birds were seen or heard during the hour we were preparing our breakfast and packing up. Even a pair of ravens circled over to see if we were leaving a morsel of refuse that they could eat.

We drove into Ajo to replenish a few supplies and get gas. The visit was short and we were again back in the monument. One can hardly appreciate the beauties of desert flowers until a condition as is now present along the western slopes of the Ajo Mts is witnessed. it seems to be one of nature's habits to give abundantly at times and the year she is certainly being lavish in this area. Poppies, mustard, lupines and a

small white flower Carpet the ground in great areas, interspersed with giant cacti and spiny cholla - a paradox if one can imagine it. I tried to make a few pictures but monochrome photographs fail to display the beauties.

I found a large number of bannertailed kangaroo rat mounds far down the valley. They seemed to keep to the more gravelly soil where the drainage was good.

One burrow was found amid a riot of poppy blooms and the rats had made avenues through them . Poppy Roads in reality!

Birds were not numerous. Saw a few Brewer sparrows in the brush and near the divide at the south end of Valley of the Ajo. Saw a lone robin. Several pairs of mourning doves were seen along the road.

Mr. Nichols had told me of gopher sign he had seen near the south end of the Puerto Blanco Mts. so when we arrived at this point in midafternoon a search for them was made. Fresh sign was fairly common so we dropped the truck under a palo verde near the bank of a large wash and had little trouble in setting out a dozen gopher traps in the 2 hours we had to work.

After dinner I made up the four specimens taken from the traps this morning while Phil, with his flashlight, looked at the near gopher traps. He brought in 3 specomens and they too look new!

Screech owls, Horned owls and poorwills were heard nearby so with our flashes we set out in pursuit. Worked til 11 p.m. with no luck at all. They all seemed extremely wild and we were never, to our knowledge, within gun range.

Found a number of quail roosting in a dense thorn bush but put out our lights and passed without disturbing them.

Picked up 2 more gophers before turning in.

March 19, 1939

Dawn came with an overcast sky and a Crissal thrasher sing beautifully in camp. This species seems to be found along the washes where there is a good deal of cover. Quail, phainopeplas, Desert sparrows and a pair of gnatcatchers were close about while the cheep cheep cheep of a flicker was heard almost continously from the giant cactus which was growing profusely near the base of the nearby hills.

As I worked skinning the gophers the camp songster, Mr. Crissal thrasher sang from many places nearby. His favorite song stand was atop a single stalked giant cactus that towered above all other trees and shrubs. This perch was about 100 feet from where I sat and I looked at him many times with my glasses. He always sang with his beak open and a few feathers on his throat were raised though no great bulge was evident as with a mockingbird or tame canary.

The mandibles did not close with each note but were kept open at the same distance, without motion for the whole song length.

As recorded at Quitoboquito the song of this thrasher is decidedly musical to listen to - is not monotonous with repetition and is in no way imitation. It is distinctively Crissal thrasher and indeed this singing bird at camp on the south end of the Puerto Blancos is a memory that long will be remembered by me.

Phil went scouting for more gopher work after breakfast. He followed the stream bed down a half mile then up another branch that led to the south west of camp. No more gophers below the small area in which we had trapped. The ground all was filled with rocks and large boulders and not turnable for gophers. He saw several interesting birds chief of which was a pair of very tame cardinals. Other things were Mourning doves, Gilded flickers, Sparrow hawks (1 pr), phainopeplas, Plumbeous gnatcatchers, quail, 1 pair Palmers thrashers. These latter birds seem to be found only within the areas in which cholla grows. spc. of cholla ask Nick.

Near camp I saw a pair of ravens and heard a Cactus wren singing far away towards the hills.

After I had completed my work we both turned northwest for a further search for gophers.

I found several old nests of Palmers thrashers situated, as always, in the cholla. One nest was of particular interest for while old, it still showed the efforts of the parents. The ingress and exit to the nest was plainly visible where the points of the cholla spines had been either broken or completely taken off. Also the nest was characteristic. The cup was deep and dense. For perhaps the top 4 inches of the nest was a lattice of thorny sticks. Thus the bird could see out and still be protected with a screen or at least think she was protected.

Phil found two rather fresh gopher mounds and set two traps. I found nothing in my wash as it became more rocky as the stream bed came near the hills.

However, I found a single Vesper sparrow which I collected. It was feeding on pepper grass seeds in a little flat sandy bar in the wash. I was stuffing its beak when I heard a hiss, quite loud, and it seemed to come from a bush of hard rocky strata on the creek side. I looked that way expecting to see a badger as this noise sounded exactly like one. My attention was suddenly jolted when the all too familiar rattle of a rattlesnake was heard and not 10 ft away was a fair sized reptile near a small bush. It had seen me first. I had the last turn, however. At camp, when the snake was slit for the pickle jar it was found to be a male and had a large *Perognathus baileyi* in its stomach.

The gopher traps caught one more specimen.

After lunch the threatening sky broke a bit but as the spot was not good collecting we packed up and left for Gray's ranch. A couple of miles north of Sonoita a pair of Mourning doves and a mockingbird were seen. About 1 mile east of Sonoita I saw several Brewer sparrows and a lone Sage thrasher in the atroplex.

Gray's ranch lies 5 miles east of Sonoita. A group of small low rounded rocky hills rise above a vast expanse of valley floor and the ranch house is nestled against the most eastern one and but a few rods north of the U.S. Mex. boundary monument 165. The hills are cactus covered - giants, barrel, organ pipe and some flat leafed. The surrounding flats, nearest the hills are rather well covered with atriplex or salt bush which, as elevation is gained, gives away to a complete coverage of creosote. Along the many washes that seem to spread out towards the distant Ajo Mts. to the north west, like an expanse of lace, large mesquites and scattered ironwoods were growing. Their regular spacing looked almost like a planted orchard though it was simply a case of water supply for their roots that governed this.

The ranch house was a rather large adobe with several rooms, a wide brush thatched ramada that extended the full length of the house offered shelter to the occupants in the hot season. The cleanliness of the dirt floor and the usual burlap covered olla swinging in the center with a scattered array of old chairs and boxes gave a homey effect to the place. We were greeted by Mr. Gray and given permission to camp any place we should choose to stop. He showed us where we could obtain water for camp needs.

Here a windmill pumped water into a small concrete trough. The out flow ran into a small circular dirt reservoir which in turn supplied water to several troughs in four or five wooden corrals.

Upon approaching the small reservoir a lone female shoveler duck flew up and alighted in the corral not 50 ft away. The duck was extremely tame tho wise enough to keep out of man's reach. Later in the afternoon this duck proved a most ludicrous spectacle. It hopped out of the pond as I came up in an almost vertical flight then down into the flock of 8 or 9 domestic chickens feeding in a small patch of pepper grass. The chickens started to move and the duck waddled after. A large red rooster resented the duck's presence and made a peck or two at it with his beak. The duck seemed intent on going along so simply stayed farther away and waddled along.

Several English sparrows were seen in the corrals and numbers of mourning doves came in to drink at sunset.

We pitched camp a hundred yards up the wash from the windmill right in the center of a range of territory claimed by a pair of mockingbirds. The male's singing perch was in a thorny protea not 6 ft from the truck and as the last rays of sun fell over the mountain tops north of us he gave an evening concert, beautiful to hear.

Phil set a line of mouse traps through atroplex, creosote and mesquite association this evening.

After dark a Screech owl and later a Horned owl were heard far up the creek.

We stretched the tent this evening as the overcast sky offered a threat of soaking us later.

March 20, 1939

A slight breeze had cleared the sky during the night and the sun rose like focused light of a huge looking glass. There's a hot day coming!

The traps held 2 new species for our collection this morning, 1 onychomys and 4 Perognathus penicillatus. Three Dipodomys merriami were also taken and completed the tally of the catch.

I saw 3 Vesper sparrows feeding on the grass seeds nearby. One shot proved to be a female. A pair of ravens and a beautiful Red-tailed hawk were seen over camp and numerous phainopeplas and a pair of gnatcatchers were seen in the mesquite near the tent door as I prepared my specimens. The mocker continues to serenade the camp from several vantage points. He seems not at all perturbed about our presence but but vigorously resents phainopeplas from entering his section. Oddly enough a pair of phainopeplas have claimed a rather heavily mistletoe-clad mesquite a couple of hundred feet away across the wash on the flat - yet visible from where I am working. They in turn



fight off the mocker when he chances to venture into their territory. By chance a White-rumped shrike alighted on the uppermost branch. It had no intention of eating mistletoe berries but the phainopeplas seemed not to be able to differentiate between him and the mocker and succeeded in running him out.

Phil hunted over the rocky hills, flushed a poorwill but didn't hit it. Saw many Gambel sparrows, 5 meadow larks and Gila, Mearns, Gilded and Cactus woodpeckers.

Found 3 fresh gopher holes near the corrals and set traps. Hope luck is with us for there are 2 small hogs at large here and offer a camp menace as well as robbing the traps.

He hunted lizards most of the afternoon, shot about the mesquites and the corrals.

Traps were set east of camp this evening through a scattered growth of atriplex and creosote on silty ground.

About 4 o'clock I hunted up the wash. Birds that were needed for specimens were scarce or in fact nil. I saw a single Ash-throated flycatcher, many phainopeplas, 2 pairs of gnatcatchers, several Gila woodpeckers, 1 pair of Gilded flickers and shot a male Costa hummer by mistake.

As I was hunting over some level open ground I came upon a new snake track. I determined the direction it was going and followed it for several yards into a small creosote bush that had a heavy growth of annuals under it. Circling this I could not find where the snake had gone out so began piercing into the annuals. There he lay right up against the creosote bush roots. I called Phil to fetch the snake gun and we soon had a rattler no 2. It had only a short time before captured and swallowed a round-tailed ground squirrel.

We looked at the gopher traps before going to bed and found a female had been caught.

March 21, 1939

The mouse traps held but a single *Dipodomys merriami* this morning. The gopher traps 1 more female gopher.

We hunted over the rocky hills this morning. Desirable birds very scarce. Saw many Gambel sparrows, Brewer sparrows, several pairs Desert sparrows, 3 pairs gnatcatchers. Saw a mated pair of Sparrow hawks hovering over a giant cactus. A large hole with several splotches of white excrement was evidently the chosen home.

A Prairie falcon flew over and tho I shot at him the charge of #9 shot was not heavy enough to kill him.

Seven Meadow larks were found near a small wheat field and 2 of them collected. One of the larks looks very much like *S. magma lilliam*.

In conversation with Mr. Gray I was informed that *Lepus alleni* was abundant here several years ago. In fact Mr. Gray stated that often in the evening during summer time 50 could be seen coming into the reservoir to drink.

I saw an adult cottontail run from the U.S. side of the boundary into Mexico this morning. By chance when I came near the spot from which the rabbit had fled a very small young one was seen running into a hole under a large prostrate mesquite trunk.

At the well today I saw a pair of Say phoebes and a dozen Brewer sparrows. The latter were having a good bath in the water. Hot day and how they did enjoy it. I don't blame them.

Phil set 10 Schuylers for round-tailed ground squirrels this afternoon. This species is abundant on the open ground near about, but it is decidedly notable that the most active part of their day is from 3:30 until dusk. Early morning and noontime seem taboo, either too hot or too cold.

The mouse traps were set over the rocky malapai hills this evening.

The clouds that had been concentrating on the northern horizon broke after dark and all evening a brilliant display of lightning was seen north and east far beyond hearing of the thunder.

March 22, 1939

The mouse traps held 1 young *Neotoma albigula*, 1 *Perognathus baileyi* & 2 *P. penicillatus pierci*. The latter were damaged and not saved.

The Schuylers held 3 round-tails of which only 1 was usable.

We both bunted north of camp this morning. After looking at a new (to us) species of cactus Phil had found. He went lizard hunting and after lunch reset the Schuylers for round-tails.

While skinning this afternoon a strange bird song was heard. It was a high monotonous, rather long trill not at all musical and very thin. It was not intense in volume and came from the bush in camp. I saw what appeared to be a gnatcatcher, on second glance the actions were not right nor did it act like a verdin. It seemed to sing something like a bushtit but more like Lutescent warblers. I shot it and found the first Lucy warbler for the season, a male.

About 3:30 we took rat and mouse traps and our guns and went out to the place I had found the Dipodomys colony this morning. We set 10 Schuylers in what seemed to be well used burrows of bannertail kangaroo rats.

In one mound unmistakable tracks of Gila monsters were found. Mr. Gray verified their presence in this vicinity. A line of mouse traps were set in creosote brush growing in an almost continuous stretch of malapai.

Heard the Screech owl and poorwill after getting into bed. The Spoonbill duck was missing this morning - must have journeyed northward.

March 23, 1939

Cold stiff wind at sunrise, later calm. 50° at 7:30.

The traps were very disappointing. No rats whatsoever. Cattle tramped several of the sets and ate up the markers. All traps were found, however.

Mouse line held beautiful male adult Onychomys, the first good one so far. 4 Perognathus amplus. This animal seems to prefer malapai ground and 5 Dipodomys merriami. This latter animal is probably the most generally distributed species on the monument. Occurs on nearly all hill or slightly hilly ground and even in rocky soil.

During the day 5 Round-tailed squirrels were taken from the traps.

A large brown hawk with a white rump patch was seen at several hundred yards distance today. Its flight was heavy and it darted much more agile than a Red-tail. Nothing else but a Harris hawk would answer the actions. Was definitely not a Marsh hawk.

At lunch time I saw the Prairie falcon tower up from the ranch house where it had probably made a dive at a chicken.

In afternoon while skinning I shot an English sparrow and an Arizona hooded oriole from the trees in camp. The oriole was the first seen so far.

Phil set the rat traps again in the colony trapped last night in hopes of catching at least one for positive

identification. After dark we visited at the Grays for an hour.

March 24, 1939

Heard roadrunner chuck chucking nearby this morning while skinning specimens.

The 30 day period in the monument expires today so after getting up the specimens we started packing up preparatory to our departure.

Left Gray's ranch about 2 p.m. bound for Ajo and thence to the Headquarters of the S.W. Nat. Monument at Coolidge. We took Mr. Gray with us as a guest passenger as far as Ajo.

As we entered the southern end of the valley of the Ajo a small rattlesnake was found crushed in the road. It was still in condition suitable to pickle and we slit and put it in alcohol then and there.

Near the northern boundary of the monument a Desert gopher snake was found in the road. It was badly crushed and not worth saving. However, it marked the first record for the species in our survey.

As a parting observation a roadrunner sprang from a thicket of creosote by the roadside and sailed across just in front of the speeding truck making the third one seen (though many have been heard) for the period.

Left Ajo about 4:30 and arrived in Coolidge about 7:30 just after sunset.

Called Mr. Pinkley by telephone and then drove to his office in the Casa Grande N. Mon. where the evening was spent chatting. He is a most entertaining person and the time passed quickly.

We camped for the night in the parking lot near the office. In a pond 6 miles west of Casa Grande I saw a mated pair of Buffle-head ducks swimming in a pond caused by the concentration of rain water in a large excavation near the road.

March 25, 1939

Spent 2½ hours this morning making out report with the expert help of Mr. Page, chief clerk of the division.

Left Coolidge at 10:45 a.m. bound for San Diego where we arrived at 9 p.m.

April 20 - May 24, 1939

Huey with Phil Lichty to  
Organ Pipe Cactus National Monument, Arizona

also Bonet Well, Alamo Canyon,  
Valley of the Ajo and Camp Verde

April 20, 1939

Left home at 7 a.m. picked up Philip Lichty and his equipment and we were on our way bound for the second session of the Organ Pipe Cactus National Monument Survey.

Fog enveloped the coastal region at this hour but near Alpine the sun burst forth and promised to shine brightly for the many days to follow.

Near Buckman Springs I picked up a freshly killed Screech owl by the side of the road. The bird had been struck by an automobile during the night but was in perfect condition.

An uneventful journey ended in camping at Bates Well about 10:30. The sun had set shortly after we had left Gila Bend and we had driven the last 40 miles slowly in hopes of finding a snake or two but no luck. The evening turned crispy cold compared with the day and was probably too cold for snakes to be out.

April 21

Was awakened at a very early hour by the alarmed call of an Ash-throated flycatcher in the mesquite under which I had set my cot. Evidently I had moved in on him while he was sleeping and he was voicing his astonishment when he awoke to find so much strange equipment under his tree.

Shortly before sunrise mourning doves commenced cooing and later they seemed to be coming from all directions to drink from the cattle trough.

We looked about for a camp site and finally located about 200 yards east of the windmill under a couple of large mesquite trees.

Birds were not abundant. Saw several linnets and a half dozen Green-backed goldfinches near the trough. The usual pair of Gila woodpeckers were present and I shot a lone Red-winged blackbird that strayed into the water trough.

A few migrants were picked up about camp as it was soon too hot to move about until we were more acclimatized. A pair of Arizona hooded orioles had their nest in a clump of mistletoe about 20 ft above the ground in a mesquite near camp.

Saw a number of Turkey vultures flying about and a Lazuli bunting near the trough when we went for water about noon. I picked up the first horned toad for the trip. The reptile was resting in the soft silt under a mesquite and made no attempt to run when I found him.

Phil went out after lizards about noon and found a family of verdins, one of gnatcatchers and a phainopepla's nest with young. He found lizards were not abundant but several species were out that were not taken when we were here last February-March.

Two U.S. Immigration Inspectors and the Sheriff from Ajo came in and had their lunch nearby. Mr. Mearl and Mr. Bascomb (sheriff) reported seeing 5 male antelope in the valley of the Ajo about 3 miles north as they were driving down. As the fellows were leaving we heard a 22 rifle being shot and stepping out from camp I found these fellows shooting at a poor old roadrunner. Why should they persecute these birds!

While skinning this afternoon a large whip-tailed lizard was seen feeding a few feet from my chair. I tossed a small portion of birdmeat near him and his response was immediate. He pounced upon it and swallowed it quickly. I tried the stunt again with the same result. The lizard became quite tame and before it left it had eaten the entire body of a Ruby-crowned kinglet and the meat from the legs of two other warblers. The actions of the whip-tail were decidedly interesting. The movement of ambulation was quick and jerky and occasionally he would run his face into soft earth as if diving. This was probably his method of cleaning it. Also the lizard would slap at things with a front foot. This action was always used when a small piece of meat had ants upon it. Also he was seen to shake a piece of meat violently much as a dog shakes a shoe in play. No doubt to loosen bits of dirt or ants from the tid-bit.

In the evening after sunset poorwills were heard calling all about and a Horned owl sounded out from the mountain side south of camp.

A line of mouse traps were set through the creosote on gravelly soil this evening. We looked at them about 9 o'clock finding 1 Perognathus amplus and 2 Dipodomys merriami had been taken.

April 22, 1939

The traps held 3 more Dipodomys this morning.

Shortly after breakfast Phil and I hunted up the wash from camp. We found several occupied phainopeplas' nests all with young, 2 or 3. A pair of Black-tailed gnatcatchers had their nest in a dead clump of mistletoe about 4 ft above the ground and we found 3 young almost large enough to leave the nest.

Phil found a female cardinal and after a half hours search found the nest. Together we watched the pair for some time. The nest was situated about 8 ft above the ground in a cat claw bush and was placed in a small bunch of mistletoe. The structure was rather small, very grosbeak-like and composed entirely of plant stems. 3 bluish speckled eggs were about half incubated.

Farther up the wash we found an phainopepla's nest situated about 5 ft above the ground in a cat claw. It held 3 small young and was in a fair position to photograph. I cut away some of the branches to facilitate the work which I plan to do tomorrow.

On the way down the wash I shot a white mt. Hermit thrush and saw another. Warblers were abundant. Shot 2 Hermits and saw many more, saw many Gambel sparrows, 1 collected. Many Audubon warblers, many Pileolated, several Tolmie's.

Toward evening the sky clouded over and looked like it might rain.

Phil set a line of traps through the creosote again this evening.

April 23, 1939

The sky was still clouded over this morning but the threat of rain was nil. It made the weather much cooler for which we were thankful.

Saw a single Vaux swift fly past this morning as I was preparing breakfast.

The traps held 1 *P. merriami*, 1 *Perog. penicillatus*, 3 *Perog. amplus* and 1 *Perog. longimembris*.

I put up these specimens then shouldered 2 cameras & set forth for the nests located yesterday.

Not far out of camp I found the tridant tracks of a Gila monster in a cow path. We followed it for 50 yards and then lost it on hard ground. A second one was found farther along and followed for several hundred yards in the soft soil. This one was smaller in size then the first one. Tonight we will try to locate them by lantern light.

The phainopepla was tending her young ones when we arrived and I set up my graphic with a 10" lense. The sunshine was decidedly hot and it shone directly on the little birds so it was imparative for their safety not to let mother stay off too long. She proved to be so camera shy that half an hour later I packed up and left.



Before going, however, I cut 3 long heavy branches from a mesquite and tied those up like a tripod and set them at about the working distance of my 18" lense and will try again tomorrow.

We stopped at the gnatcatcher's nest on our way back and found the young were ready to leave. In fact as I put my hand over the nest to capture the young they all hopped out and Phil and I had quite a time scrambling through the dense catclaw bush catching them. They were confined in a camera case until a perch was erected and then the most tractable one was placed on the stem. The next 2½ hours were spend photographing the parents as they came to feed the baby. It was not an easy task for the baby was restless and had to be put back on his perch many times.

On my way back to camp the first White-winged dove was flushed from a mesquite near the truck.

Phil set a line of traps through the creosote again this evening.

After dark we took our flashlights and searched the neighborhood for poorwills and Gila monsters. We worked until after 10 p.m. but no luck. The evening had turned decidedly cool (51° at 10 p.m.) so guess the reptiles were not active.

April 24, 1939

The traps held 4 specimens, 2 *D. merriami* and 1 each of *Perogn. intermedius* and *penicillatus*.

The Mourning doves are as abundant as upon our arrival and came in droves each morning & evening to drink at the trough.

A Crissal thrasher came into camp searching for worms this morning. Instead of probing the ground with its beak it was most agilly climbing to the stronger branches of a rather dense mesquite searching the ends diligently "warbler fashion" for worms. She must have a nest full of young nearby and we did not molest her.

After getting up the mammal skins I set out to photograph the phainopepla with a long focus lense. It worked well but finally ended with 3 dead baby birds. Much to my sorrow.

Saw a lone Golden eagle flying high overhead.

On our way back to camp we collected several birds. Flycatchers (*Empidonax*) were abundant today and probably all three species were present - Wrights, Hammond and Western. Saw a lone W. Wood peewee but didn't get a shot at it. Numbers of Western tanagers observed today and a second pair of cardinals were found nearer to camp.

Arizona hooded orioles are abundant and all are nesting. They use the mistletoe clumps to hide their nests in. This parasite is probably the most useful element on the desert to maintain bird life, it seems. Made a couple of films of the cacti not only as food but shelter for their nests.

Hermit, Tolmiei and Pileolated warblers were abundant through the mesquites.

Phil found a mockingbird nest with 2 small young and 2 rotten eggs. It was situated about 8 ft above the ground in a cat claw bush.

While I skinned birds in the afternoon he hunted west of the well down the wash. He found a place where some hunter had cleaned a great number of mourning doves recently. The wings and heads with a great pile of feathers were found in the wash.

Also a verdin and another gnatcatcher's nest with young were found.

Traps again placed in the creosote for more Perogn. this evening. After dark we hunted with our lights but no luck.

April 25, 1939

Traps held 2 *P. amplus* and 1 *P. intermedius*. The latter not saved.

Shot a male Townsend warbler in camp this morning. Hunted until nearly noon. Pileolated, Tolmiei warblers abundant. Saw several Western tanagers, 2 Green-tailed towhees, 3 Canyon towhees. This was probably a family party either 2 young and 1 adult or 2 adults and 1 young. I did not collect them as I feel that these well known residents are better left alone.

Several White-wings about this morning. They do not seem to be coming in as thick as I am told they will later.

Watched a pair of cardinals eating fruiteae berries. A beautiful sight. Bright red bird on green bush in bright sunlight.

Phil brought in first White-crowned sparrow this morning. About 5 o'clock this evening we went down the creek to photograph a great burial of illegally shot dove offal that Phil had found. Made a couple of films of the cache to use in reporting the matter to the Dept. Traps set again in creosote this evening.

On the way back to camp I found a medium sized Gila monster and near camp Phil picked up a small horned toad.

After dark I went poorwill hunting. In 2 hours hunting I killed one and had a shot at 1 other. Phil killed 3 near camp.

April 26, 1939

The traps held 1 Perogn, amplus & 2 D. merriami.

The three Gray brothers visited our camp this morning and brought me a tail of a Black-tailed deer. Their Indian cowboy had found a skin and bones in the Valley of the Ajo, about 3 weeks ago. He came upon the hunters skinning 2 deer but was afraid to accost them. When they left he picked up the skins.

Went hunting after getting up the accumulated material. Birds were not abundant. Saw several Green-tailed towhees, 1 W. tanager, several W. woodpeckers, a few Western flycatchers. Pileolated and Tolmiei warblers are still the most abundant birds. Poorwills commenced calling at dusk and Phil took the headlight for the first hunt this evening. I later joined him and we worked along the creek bottom. during the next 2½ hours 10 poorwills were taken. Phil getting 9 of the lot. Nearly all were shot from perches on dead limbs or stumps and but 2 or 3 from the ground. Surprisingly, after the first period of calling early in the evening the birds were all quiet and all were found by eye shine.

April 27, 1939

The only bird shot this morning was an Audubon warbler from the tree over camp. However, I had my hands full with last night's poorwill catch.

Saw 3 cowbirds fly past this morning and many Lazuli buntings.

Heavy thunder clouds sprang up about 11 a.m. and later a small sprinkle of rain fell.

Mr. Nichol came in about noon and as we were almost packed up ready to move he waited and we all moved together.

Left Bates Well about 2:30 bound for Cipriano Wells where we planned to spend the night.

Several Mourning doves and a single Lark sparrow were seen as we passed Growler Mtn.

The route skirted <sup>the</sup> south eastern end of Growler Valley and several Palmer thrashers were seen. Kit fox tracks in dried soil.

The slight rain sprinkle had crusted the wheel tracks in the road making tracks easily seen. I found a very tiny sidewinder in the road.

Near Cipriano Wells a large rattlesnake was picked up by seeing the tracks in the road.

Spent the night at Cipriano Wells where Phil set out a line of mouse traps through the creosote bush. Heard Hoot owl calling during the night.

April 28, 1939

The trap line was almost nil - 1 Perognathus. We got an early start for Quitavaquita. About a mile north of Quitavaquita I saw a pair of very wild Cactus wrens. It is surprising how very scarce this species is in this cactus covered region. A Red-tailed hawk was seen perched on top of a giant cactus nearby. A pair of shrikes perched on top of nearby giant cactus. These birds appeared to be hunting food for young.

In due time we came to the pond at Quitavaquita. A nice array of bird life greeted us - 2 pairs of Shoveler and 1 pair of Green-winged teal ducks, 27 Western willets, 1 Black-necked stilt, 4 killdeer plovers, 4 solitary sandpipers, 2 Spotted sandpipers, 6 Wilson phalarope and 1 Wilson snipe.

A lone kingfisher rattled about over the pond and 2 Black-crowned night herons were roosting in a densely leafed cottonwood. Small birds were not common - several Pileolated warblers, one or two Yellow-throats, 2 pairs of Arizona hooded and 1 pair of Bullock orioles, a pair of western kingbirds and several English sparrows were noted.

We drove over to the small spring that rises about 1½ miles north. A few Mourning doves and a single Lazuli bunting were the only birds about the place.

Several Turkey vultures, a lone raven and a Coopers hawk

completed the avian population.

We decided against stopping at this spring so turned back and made camp under a large mesquite in José Juan's wheat field.

After lunch we sat down to skin the 3 or 4 specimens that had accumulated while Phil went up by the pond to hunt. He was soon back with the report that 3 White-faced glossy ibis were in. I returned with him but instead we found a Mexican grebe. It was found near the edge of the pond and voiced a rather loud note as it was surprised by our presence.

The ibis were gone but Phil flushed them later from the spring and I saw them flying past.

Nichol spent the afternoon collecting plants west of camp.

Later in the afternoon a gopher snake came into camp and was captured. Later when pickled it was found to contain 8 Gambel quail eggs. Evidently a whole clutch as they were nearly hatched.

Caught 3 toads late in the evening. They came into camp after the lantern was lighted and were probably attracted by the light or bugs that were flying near the light.

In the late afternoon numbers of Rough-winged swallows coursed over the wheat field and 2 were shot.

After sunset a poorwill was heard and about a dozen Texan night hawks fed over the fields. During the night the poorwills came right into camp and called several times.

April 29, 1939

Nick decided to leave for Tucson this morning so we were left alone again.

Phil hunted about the lake while I put up a few skins left over from last night.

The willet had left during the night but one other stilt had joined the one seen yesterday at the pond.

The phalaropes had left too, and also both species of ducks were gone but a pair of Cinnamon teal had come in. This pond is a resting place for a few passing water birds.

After the skins were up for the day I went up to the pond to try a chance photograph of the stilts with my telephoto lens. Two male Yellow-throats and a Cliff swallow were taken while there.

Saw a Prairie falcon fly past just out of gun range at noon today.

About noon when hunting lizards Phil flushed 11 White-faced ibis from the pond. After dark poorwills were heard again and Phil succeeded in collecting one with the aid of the jack light. It proved to be a female and was in laying condition. 3 bats shot in camp at sunset.

April 30 1939

Heard Horned owl hooting during night. At sunrise I killed 2 cowbirds and 1 redwing with our 38 gauge shot out of the camp tree.

Phil hunted by the pond and on over into the big mesquite wash to the east. Bird life was almost nil. He reported 1 stilt, 1 kingfisher, 4 killdeer to be the only occupants of the pond. He brought in 1 Warbling vireo and 1 male English sparrow for this morning's work.

Two young fellows from Ajo came in with him. One was a young engineer and the other was the chief engineer's son. Both knew Mr. Charles Morrison very well.

In camp I had shot 4 more cowbirds, 1 Blue grosbeak and 1 Red-winged blackbird. So work went on as usual.

After lunch Phil went back to the pond returning with 3 Solitary sand pipers, 1 Wilson phalarope and 1 male Yellow-throat. These birds had come in since his morning visit.

About camp I saw several Pileolated warblers, 1 Warbling vireo and the pair of Lark sparrows. This latter pair have a nest near about but I haven't had time to search for it. I took 2 chance shots at a Cooper hawk as it flew past camp.

A pair of Western kingbirds have decided to make their summer home in a cottonwood nearby and make life miserable for any raven that chances to pass. I watched one of them pluck a feather from the back of a raven today as it was attacked when flying past.

May 1, 1939

Phil hunted again near the pond this morning. The stilt, 1 Solitary sandpiper and the Wilson snipe were still about. He saw 4 White-crowned sparrows and collected 1 female Red-winged blackbird and a Sharpshinned hawk.

I stayed in camp to get the work all done. Shot a cowbird and a Red-winged b.b. from tree overhead. Missed a male Blue grosbeak. Saw 2 Lazuli buntings in the wheatfield and a Marsh hawk coursing over. This hawk is one of a pair that lives near the river as they were seen several times on our last visit. A young Costa hummer lives in the mesquite tree over camp and has been heard flying about during the bright moonlit nights we are now having.

Packed up and left shortly after noon.

Our route lay over a wide valley floor covered with palo verde, mesquite, cholla, giant cactus, in fact all the desert growth common to the area. We plan to spend the night at Bonet Well. This well is near the south base of the Bates Mountains and has recently been dug by the Gray Bros. for watering their cattle.

When about 2 miles south west of the well a flock of about 150 - 200 Lark buntings flushed from the road side. We collected 6 of them.

The area about Bonet Well is covered with a heavy growth of the desert vegetation. Some of the mesquites and ironwoods are immense. Giant cactus, creosote and burr sage grow in profusion all about.

A new windmill supplies good water to a large cement cattle trough located inside a barbed wire corral. The mill runs whenever the wind blows and the overflow from the trough runs off down into the wash, making an ideal watering place for wild life.

An Indian and his boy were resting under some nearby trees when we came up. He told me that he had seen two deer about a half mile down the wash when he came in 2 hours previous.

I hunted about the place for an hour. Desert birds were all present - Palmer thrashers: 1, phainopepla abundant. Several Gila Gila woodpeckers, lots of Gambel quail. Phil and I each saw a pair of cardinals in widely separated places. Gnat-catchers with young on the wing, verdins likewise, several White-crowned sparrows. Pileolated warblers abundant. 1 pair Canyon towhees, Mourning doves very common came in to water at sundown. A few White-wings were heard in several directions from the well. Several pairs of linnets.

After dinner Phil went hunting with the "Jack light" while I stayed in to skin birds. He shot 2 poorwills and heard a Screech owl but was unable to get near it. Horned owl hooting near camp and a male quail kept calling the single nuptial call all evening and still at it when we went to bed at 10:30. This no doubt is due to the full moon.

At sundown Phil had set a line of mouse traps through the creosote and slightly rocky ground near camp.

May 2, 1939

The traps held seven specimens this morning - 3 Dip. merriami, 2 Perognathus penicillatus and 2 Perog. amplus.

Shortly after sunrise Mourning doves commenced coming into the trough to drink and I was much impressed by the abundance of this species and have been wherever water was available.

Linnetts (many) Bullock orioles (?), Horned owl (hooted during night), 1 pair of Ash-throated flycatchers, numbers of young Costa hummers. After getting 9 skins preserved we broke camp and left bound for Alamo Canyon in the Ajo Mts.

We reached the Valley of the Ajo without hindrant. Saw a Crissal thrasher in the mesquites and a mockingbird in a thicket of squaw berries as we drove along. Near the eastern side of the valley not far from the Sonoita highway we got off the little-used road that crossed the valley. While looking for the tracks Phil found a Mourning dove's nest. It was the usual assemblage of a few dozen twigs but placed on the ground near a small bush instead of on a limb of a tree. I made a couple of pictures of it while the old dove circled about nervously awaiting our departure.

We arrived at Alamo Canyon about 4 o'clock and found a vastly different appearing place than that we had left six weeks ago. Instead of a flower decked canyon it was dry and dusty. Cattle had tramped this place into powdered dust and the creek had completely dried up.

A bunch of 50 or 60 cattle were bellowing pitifully about a dusty dry watering trough which had held no water for several days. Phil and I tinkered up a small gasoline engine which was hooked to an auxillary pump and ran the thing until 9 p.m. giving the poor cattle a drink.



We hunted up the canyon but found bird life lacking in variety. There were myriads of Mourning doves (several nests found. Many phainopeplas (2 nests with eggs, 3 with small young), 3 pairs of White-winged doves, 1 pair of cardinals. A Palmer thrasher's nest with 3 heavily incubated eggs, 4 cowbirds at corral, 2 Western tanagers. Many Turkey vultures (expecting the cattle to die and will probably be rewarded later in the summer). Heard a roadrunner coo-cooing from the hillside but did not see him. Heard the rattling call of a kingfisher in the canyon and saw the bird flying over. What it was doing in this dry canyon was hard to imagine. At any rate a kingbird did not like him and was hot in pursuit. Green-tailed towhees were the most abundant migrants present. A few small flycatchers. Phil killed a Hammonds and I saw a Western. Saw 2 Black-headed grosbeaks, collected one. Heard and saw a mockingbird.

After supper Phil went hunting with the "Jack light" while I sat down to work. He found and collected the first Elf owls for the trip. Heard more of them near camp after he came in from hunting but did not go out again.

May 3, 1939

Doves started flying up canyon shortly after sunrise this morning and for an hour or more thousands must have flown by. All were headed up canyon to some large tanks to drink. I do not believe I have ever seen them about these desert oasis this year. All seemed to be paired.

Yesterday evening we found numerous places along the creek bed where hunters had killed and cleaned doves. The game laws are certainly flagrantly violated in this section.

Mr. Nichols came in just after noon today. Phil and I both hunted with our flashlights this evening. I got 1 owl and Phil 2.

The Elf owls seem to have a single call note that is not unlike the single note of a flicker. It is issued singly tho occasionally 2 calls in quick succession are given. Their perches are nearby always on dead horizontal limbs near the ground. In strong light their eyes are a slightly greenish tinge but most often the bird is found by seeing it ~~perched~~ perched like a small knot on the limb rather than by eye shine. They do not seem shy and depend a good deal on their diminutive size for concealment. They seem to become excited by our presence and commence calling thereby revealing their whereabouts. Occasionally one "sounds off" so to speak and

gives a great string of calls. This is usually done by the male and is probably a nuptial song rather than an alarm or warning note.

May 4, 1939

Nick and Phil drove to Gray's ranch while I stayed in camp to finish up a few skins.

A number of white-throated swifts were seen flying about the cliffs in the canyon this morning but none of them came within gun range.

At the south end of the Valley of the Ajo Phil picked up a rattler that was crossing the road.

At Gray's ranch the usual migrants were found. Pileolated and Townsend warblers were noted and many Western tanagers. Two males were taken.

I hunted near the well and saw the usual migrants that are common at this time. Pileolated and Townsend warblers, Green-tailed towhees. A pair of Green-backed goldfinches have been seen several times near the trough and are probably nesting near abouts.

Hunted again this evening for Elf owls getting in about 1 a.m. I got 2 Elf owls and Phil didn't have a shot.

In the afternoon Mr. Nichols had climbed the mountain on the south side of the canyon to collect plants and explore 2 large caves on the north face. They had recently been used by mountain sheep and also by hunters. He brought in an old coyote skull that had been well weathered out.

May 5

Mr. Nichols left for Tucson this morning and as he was getting into his machine Mr. Ralph Gray came in to repair the windmill. This interrupted our work and we did not get out to hunt until after lunch.

About the windmill and in the oaks I found a few desirable birds. Shot a Russet-backed thrush and a couple of Western flycatchers. Found a phainopepla nest with 3 large young almost ready to leave and a Costa hummer's nest neatly saddled on an oak limb. The 2 eggs were perfectly fresh and led me to wonder if it could possibly be a second laying.

Young Costas not long out of their nests but able to fend for themselves are abundant through the mesquite and are exceptionally tame.

Doves passed as usual this evening and I seem never able to get used to their great numbers.

May 6, 1939

Two Vaux swifts flying over camp just as I arose. Shot one of the two. As we left camp heard a terrific swish and a female Prairie falcon took a dive at a passing dove and missed. Shot at it with 9 but too far. Must have a nest in this vicinity as it has been seen several times.

We both hunted down the wash this morning. Birds were scarce. I saw an Elf owl out, tho I flushed him twice I did not get a shot. Several pairs of linnets with young on the wing were seen. Phil saw 2 families of baby quail with their parents and I flushed a female from her nest which was located near the base of a small bush under a pile of sticks and counted 12 heavily incubated eggs. The bird showed little concern about her nest as I watched about 20 minutes without either seeing or hearing her. On my way back to camp I found fresh coyote and ring-tailed cat tracks in the cow trail. They had been made early this morning for the cattle came in over the trail last evening.

Found the first *Myarchus magistas* today. Possibly they are just arriving.

Phil hunted up canyon after lunch, got 6 birds 2 of which were Russet-backed thrashers.

Went owl hunting this evening. I went up the canyon, Phil went down. I had 1 shot - 1 owl. Phil found an owl poking its head out of a hole in a giant cactus but didn't kill it.

May 7

Raven about camp this morning, has been seen several times lately. White-winged doves seem to be more abundant this morning.

I tried to make some pictures of the doves at the trough but no luck.

Phil hunted nearby. Saw several Russet-backed thrashers got 1 and 1 Hermit warbler.

After lunch we went up the canyon to a phainopepla's nest to photograph the young. On the way I shot a Chipping sparrow and saw the Cooper hawk again. The 3 young phainos were just

ready to leave the nest and proved splendid subjects. The old bird would gather frutea fruit and squeeze the piece into their beaks. Also found a Green-backed goldfinch nest in an oak tree with young ready to leave so will work them tomorrow.

May 8, 1939

Doves not nearly as abundant this morning, probably large migrating bunch has moved on.

Tried for some pictures at the trough but not enough birds to make it worth working.

Disappointed with goldfinch as young had left the nest before we arrived this morning.

While at the trough I saw 5 or 6 Lazuli buntings, males and females, many linnets and Green-backed goldfinches.

Golden eagle over camp and Prairie falcon again after doves.

Found an Arizona hooded oriole nest with 4 fresh eggs in clump of mistletoe growing in mesquite near corral. Female flushes. Had seen male about for some time though he was always very quiet. Nest composed of horse and cowtail hair bound with soft grasses. Most of the hair was white, apparently gleaned from old white horse that has been pastured near tank all spring.

Shot at a Canyon wren this morning wounding it but it escaped in rocky crevice. This is the first one I have had a shot at in the monument. Have heard them occasionally in the canyon.

Phil saw another Black-throated gray warbler this morning. I shot a Chipping sparrow near corral and Russet-backed thrush in wash.

The roadrunner heard cluck-clucking on the hillside during our stay last trip is still calling. The actions of the bird would seem to indicate that it had not been able to find a mate and that it was determined to find one or coax one into this canyon to nest.

The day was warm and with but an occasional gust of wind to make things cooler. We packed up and left about 4 p.m.

On our way out we searched through 2 tunnels on Copper Mountain for bats with negative results.

A half hour's drive brought us to the Mexican line where we turned east. At the second mesquite bordered wash east of the highway or as the locality will be known "2 miles east of Dowling Well, Sonoita Valley, Pima Co., Arizona", we decided to stop and try a trap line through the salt brush. We drove off the road and made our camp under a large mesquite on the bank of a sandy wash. An old well, a few yards from camp was the home of a pair of Say phoebes. Four young on the wing were driven from the well when I threw a large clod of earth into it. The young birds were just able to fly and though we chased them as hard as we could, even they were able to keep out of reach. These young birds spent the night in the mesquites nearby much to the distress of their parents.

Traps were set through the salty atropex and silty ground in hopes of getting silky perognathus.

At the end of the line as the last few traps were being set the voice of an Elf owl was heard in the nearby mesquites that bordered the creek. Phil later stalked it with his hunting light but the only time he saw the owl was when it poked its head out of a hole in a large giant cactus, a place the owl, if shot, could not be retrieved.

We hunted snakes with the lantern for 2 hours but caught only a single banded gecko on the road.

May 9, 1939

The trap line was a failure, 2 *Dipodomys merriami* and a single *Perognathus penicillatus*. Only the latter was saved.

The phoebes were all being fed by the parents when we left to go up the wash hunting this morning.

Birds were fairly abundant this morning, Gambel quail, a few Mourning doves, a pair of mockingbirds, many phainopeplas, all with young on the wing, many verdins with young on wing, gnatcatchers also with young out of the nest. In fact all the locals had their young out.

There seems to be a three-phase nesting period, just thrashers, Horned owls etc. Then phainopeplas, woodpeckers, gnatcatchers. Cardinals, Screech owls & Elf owls. Then Ash-throated flycatchers, Ariz. crested flycatchers & doves. Of course any disturbance sets the individuals back coursing. One thing that was very noticeable at this locality was that white-wings were extremely abundant and Mourning doves much in the minority. At sunrise each morning the cooing of white-wings is almost a roar and seems to take up the din just when the droning night hawks leave off.

When hunting this morning I saw numbers of Pileolated and a single Tolmiei warbler. Saw a pair of Ariz. crested flycatchers and collected one of them. Young Costa hummers are not uncommon.

Phil brought in a pair of Townsend warblers and 2 Ariz. crested flycatchers.

I was pleasantly surprised to find the old phoebes had coaxed all their young into the well again. Here they kept feeding them all the rest of the day, the little fellows taking excursions out on their own then diving back in when hungry. The old ones seemed to feed only in the well. And in spite of the large size young the old ones were seen to bring out fecal matter every once in a while.

In the afternoon I saw a pair of Lucy warblers in camp. They had a nest nearby and were evidently hunting food. I watched them but they were lost before they revealed the location of their nest.

Traps were set about half a mile north of camp this evening. They were placed on malapai ground in stand of creosote. This I hope will catch silky pocket mice.

About 10 p.m. we lit the lantern and went snake hunting out along the road. No luck on the long walk but within 3 rods of camp caught a small spotted or blotched snake and another banded gecko.

May 10, 1939

Traps were again disappointing, 5 *Perognathus penicillatus* and 5 *Dipodomys merriami* totaled the catch.

A Least vireo came singing into camp and was collected. This species is probably common along the Sonoita river bed not far below the International Boundary.

This morning Texan night hawks were heard abundantly at dawn. None have been seen near camp after morning and even tho Phil flushed several on his trap line last night, but had no gun to shoot.

At lunch time a red racer came into camp and was collected and about 3 p.m. a Zone-tailed hawk flew right over camp but was out of range before I could get a gun.

Phil gathered a great lot of cocoons this morning.

We packed up and left for Gray's ranch about 4 p.m. The distance was only  $4\frac{1}{2}$  miles and it was not long before we had refilled our water tank and headed out onto the desert where we camped about 1 mile north of the ranch house.

The locality was not a very nice camping site but was near the locality that a single *Perognathus longimembris* had been taken on our former visit.

Camp was made under a sparsely leafed mesquite and promised to be rather uncomfortably warm during the day. Hunted snakes with flashlight and lantern for 3 hours after dinner. No luck.

May 11, 1939

The traps which had been set on malapai silt in creosote association held 7 *Perognathus amplus*, 3 *Perognathus penicillatus*, one *Onychomys* and 4 *Dipodomys merriami*.

Again Lady Luck sat on my hand for during breakfast a pair of very nervous Lucy warblers were seen carrying worms in camp. They were not long in revealing the location of their nest which was in a cavity of a dead limb of the tree under which camp was located. They had 3 well feathered young and were extremely upset by our presence. Both birds fed the young and kept up a continuous "chip chipping" wherever they went. This was the only note I heard them make. Phil went hunting and in over three hours found but a single bird that seemed desirable. Quail, phainopeplas, Ariz. crested flycatchers, many pairs of Lucy warblers with young on the wing. A few migrants were still to be seen in the mesquites tho they were dwindling fast in number. A single very wild thrush was seen. A few Pileolated and Townswood warblers, while the small flycatchers were entirely missing.

I had just settled down to work this morning when a pair of English sparrows came into camp. They appeared to be traveling and after hopping about on the ground near the stove searching for bits that might have been scattered when I prepared the meal, left, taking a desert course. They appeared to have had a good acquaintance with domestic life for they had that sophisticated air that bespoke such relations with human affairs.

I made some pictures of the Lucy while preparing my specimens.

In mid-afternoon Phil & I walked down the large wash nearby. It was Phil's turn to find a gila monster. The beast was traveling over a span of silty ground near the large wash.

Found a *Dipo. spectabilis* colony near camp. Traps were set again through the creosote and malapai ground.

Looked at them about 10 p.m. No luck.

May 12, 1939

The traps held 3 *Perognathus amplus*, 7 *Perognathus penicillatus*, 4 *Dipodomys merriami* and 1 *Onychomys*. A number were injured and not saved.

Phil hunted down by the hills and grainfield near Gray's house. He found a pair of poorwills with their babies. The young could fly but he caught one and put it in a box at the ranch house. We returned in mid-afternoon to photograph it.

He also brought in a White-crowned sparrow and an Alaskan yellow warbler. Reported Green-tailed towhees as abundant. Found a Vermilion flycatcher's nest with young.

In afternoon the sky was overcast. We set out for the ranch house to photo the poorwill. When within 100 yards of the house I found a round snake bed and perfectly fresh tracks. Nearby a large rattlesnake which had just left the bed was crawling into a bush as the sun had come out brightly and the ground was getting too hot for it. When it was opened for pickling it was found to contain 13 large eggs, some of which had a well developed snake embryo.

Traps set again through the creosote malapai. This is the last line for the N.P.S. in the Organ Pipe Cactus National Monument.

While at the Gray's this afternoon a Ground dove flew in and was collected. This makes the second species that we have taken in the Sonoita Valley section that are no doubt stragglers from the Sonoita river region to the south.

After dinner we set 3 Schuylers by lantern light in a small colony of Banner-tailed kangaroo rats.

May 13

Traps held 3 *Perognathus amplus* and 2 *Dipo. merriami*. The Schuylers 1 single adult *spectabilis*.

We moved down by the grain field after I had prepared the mammal specimens. It was hoped that a more propitious bird collecting region might be explored during the last few hours of our time with the Park Service.

Two more *Lepus alleni* were seen near the rocky hill but neither were in gun range. About noon a small number of swallows were seen flying over the barley field. At least 2 were Barn swallows though they never came within gun range. 2 taken were both Rough-wings. W. w. doves very common.



A few migrant warblers and Green-tailed towhees were still about in the mesquites. The warblers were Pileolated and Townsend. Phil brought in a female Hermit. Saw a Zone-tailed hawk at a distance over the mesquites this afternoon. A pair of mockingbirds were nesting nearby and had 2 fresh eggs. A Phainopeplas nest in a mesquite had 2 partly incubated ones and the male was seen incubating at times during the day.

A pair of Vermilion flycatchers had a nest in the mesquite under which we were camping. I made a few photos of them by flash light.

At evening time 2 poorwills came close to camp but were not molested.

We walked towards Gachado by lantern light searching the road for snakes. No luck. Found fresh tracks of 2 Gila monsters.

At a late hour an Elf owl came into camp and stayed about until almost daybreak. Awakening me several times with his calls.

May 14, 1939

At an early hour two Bronzed cowbirds came into camp. I killed the male and wounded the female. Later several Dwarfs came in and 2 were taken.

We sort of relaxed today. I made more pictures of the Vermilions, put up a few skins collected near camp. After lunch we packed and left for Alamo Canyon where we hope to bathe and clean up before going on to Camp Verde.

We arrived at Alamo about 4 p.m. and found Mr. Ralph Gray stopping in the shack.

The windmill was working and we were stripped and bathing when Phil called attention to a strange black bird drinking from the cow trough. I gazed and explained that it was a Mexican crow, a new bird to the N.A. list. Phil had his 22 snake gun but the shot he took was ineffectual. I dressed poste haste and back to the truck for the gun. 3 shots later I had the bird in hand. Happy to say the least.

Drove to Ajo after dark as Mr. Gray said Mr. Pinkley was in town. However, we couldn't find him. Camped nearby for the night.

May 15, 1939

Made an early start and shortly after the P.O. opened were on our way to Camp Verde where we expect to spend the next week searching for topotype mammals. Saw a crushed Gila monster in the road  $2\frac{1}{2}$  miles north of Ajo.

Made Phoenix by noon, greased the car, made slight repairs and off.

4:30 found us a mile or 2 north of Kirkland Junction. This locality had intrigued me each time I have passed the place and it was with this background that we stopped to look the ground over. After some deliberation two long lines of mouse traps were set. They ran over grassy flats and ended in scrub oak. Several wood rats' nests were seen in the oaks and 4 traps were set for them.

Shelter for the night was found a  $\frac{1}{4}$  mile west of the buildings at Kirkland Junction amid a couple of scrub oaks. As we stopped near an oak a nest was found. It proved to belong to a pair of mockingbirds and held 4 fresh eggs. The birds were shy but I looked at the nest with my flash light later in the evening and found the yellow-eyed bird incubating.

In spite of a moonless night the male sang most of it as did 3 other mockingbirds that were within hearing distance of our camp. I have been in only one other locality in my wanderings that possessed such a mockingbird population and that was Greenwater, Inyo Co., Calif. There also the mockers were in full song though at the time of my visit the moon was full.

May 16

We were up long before sunrise and had our breakfast and had started the motor when the sun peeped over the rim of the eastern mountains.

The traps held 1 *Perognathus flavus* (Phil's line caught on the grassy plain) 3 *Perognathus amplus* (my line in an oak thicket) and three *Neotoma mexicana*.

Driving on I stopped under a juniper 4 miles up the road to prepare my specimens. Scott orioles were singing over the scrub oak hillside, Black-headed grosbeaks and Western tanagers were seen and were probably migrants. Several Gray vireos were heard singing in the chaparral and Phil finally got one with his 22 shot gun. I saved this bird for a mounted specimen to be placed in the *Perognathus* series of the public exhibits.

(identification)

Purchased a few supplies in Prescott and on to Camp Verde via Jerome and Clarksdale. Arrived in Camp Verde about sundown and finally settled on east side of the Verde River just north of a number of small farms.

A line of traps were set on soft soil in mesquite association. Lots of Dipodomys sign.

May 17, 1939

Traps were decidedly disappointing this morning, only 2 Dipodomys in spite of an apparent abundant population. They liked the bait, that is the bird seed in it.

We set out all of our gopher traps along the roadside in the nearby cultivated area. Gopher sign was abundant and I hope they work better than the Dipos.

A farmer nearby proved to be very friendly and informed me that the government was sending in a rodent squad to poison out the gophers. It seems that the B.S. or state sent out cards of inquiry and if enough were returned then an expert poisoner is send into the area.

The gophers worked well and by evening 17 had been captured.

We both set trap lines over the same general region ~~this~~ this evening.

About 9 o'clock I took my flash and searched the road side near camp. This morning fresh snake tracks had been seen there. I found a kingsnake just emerging from a Dipodomys hole. The reptile was found later to contain eggs almost ready to lay.

May 18, 1939

The total catch was two Dipos. So we packed up and started out for better trapping ground.

Stopped in at the "Salt Mine" where we had been asked by the mineralogist to obtain some blue crystals. The watchman was very friendly and gave me several fine pieces and promised to have some more for me when I left the valley.

We moved on down along the west side of the river. Stopped for lunch near a farm and soon had the very conversant owner talking to us. He told me that on another piece of land  $1\frac{1}{2}$  miles farther south he had seen numbers of Sigmodon in his alfalfa when he irrigated it. We determined to investigate.

Searching through the field no evidence was found but some very likely looking runways were found on the eastern border and we determined to trap in them.

Made camp in a grove of huge cottonwood trees on the river side of the field.

A colony of Great blue herons was situated in the tops of the trees and the noise of the half grown young was almost distracting.

A line of mouse traps was set through the mesquite in the silty river bottom nearby. Dipo. sign abundant.

Returning to camp Phil found a Vermilion flycatcher nest in a small mesquite. Nest located 7 ft above the ground on horizontal limb. 3 eggs. Looked at bird 10 p.m., female incubating. Heard Black-c. night heron after dark. Many bats about at dusk, 1 collected.

May 19, 1939

Traps held 10 *Dipodomys ordi chapmani*. Schuylers held a Dipo. No sign of *Sigmodons*.

This piece of woods proved ornithological interesting in area of about 10-12 acres were 22 occupied nests, Blue herons 4, Black.-c. n. herons 2, Vermilion flycatchers both in mesquite, 3 Mourning doves in mesquites, 2 pairs of Ariz. crested flycatchers in stubs, 1 Gila woodpecker in stub of cottonwood, 1 pr. House wrens, 2 pairs Lucy warblers in cottonwood stubs, 2 pairs tanagers, 3 pairs West. kingbirds, 1 pair Cassins (noisy), 1 pair Red-tailed hawks, 1 pair mockingbirds singing but couldn't locate nest, 1 pair quail (19 eggs) in nest. Meadow larks in alfalfa. Good note for bird, simple association - mesquite - cottonwood and buccaners-silty soil, some fallen stumps.

About sundown we broke camp and moved up the slope of Squaw Peak where traps were set in catclaw and coarse gravelly soil.

While setting traps a Mr. Thacker, who is manager of a mine on the mountain side above camp, came down to see what we were doing. He proved very affable and invited us up to spend the evening. We accepted and had a very pleasant time. Gave me a fine series of ore samples for Museum and asked us to come back in the morning and search the mine for bats.

At 11 p.m. looked at our lines by lamp light. <sup>And,</sup> ~~Ans~~ had eaten up nearly all the bait and nary a mouse did we catch.

May 20, 1939

Trap lines a failure, 1 Dipo. and 1 Perognathus intermedius.

Searched the mine tunnels getting only 1 jackass eared bat. Mr. T. gave us some fine fossils from location about the 3800 altitude near the entrance to the lower tunnel of the mine.

He suggested that we all go over to some cliff dwellings down the river where bats were abundant. So off after lunch where we had a great time probing about the old caves. Found 3 species of bats, two of the very common Mex. free-tailed and Antrozous or long-nosed. The old caves were chocked with bat guano and might be profitably worked.

Camped for the night on the beach above the river. Set all our traps in alluvial soil and mesquite association.

May 21

again the traps failed to capture the Perognathus amplus we desire to find. The catch was 7 Dipodomys ordi chapmani, 5 Peromyscus.

Drove back to the cottonwood grove to prepare the specimens.

Broke camp about 4 and located camp for the night in the creosote brush 1 mile east of Camp Verde on the east side of the river.

May 22

Traps held 12 Dipo., 2 Onychomys, 1 Peromyscus, but no Perognathus.

Found shady spot on the bank of Clear Creek near bridge where I prepared my specimens. Pair of Zone-tailed hawks seen flying over the cottonwoods. Several tanagers in tree over camp but cannot find nest.

Drove about 1 mile up on to mesa and set traps in gramma grass this evening. Does not look too good but are passing up no chances to catch amplus.

Many wood rat nests in the small stunted catclaws and flat-leafed cactus. Set 4 traps near nests.

May 23, 1939

Traps held 16 *Peromyscus* of 2 species (6 *maniculatus*, 10 others) and 1 *Neotoma*.

Drove back to Clear Creek to prepare the material. Wind blowing violently adding to the more to the already badly disappointed rat catchers.

After preparing the specimens I drove back to the Salt Mine at Camp Verde and received a very generous gift of Blue Salt Crystals from Mr. John Walker, the watchman of the mine.

We then drove back to the creosote association where on the 22nd we had captured 2 *Onychomys*. This locality seems to present the best possibilities for *Perognathus amplus* seen so far and shall try once more for this desired species before leaving.

May 24

The catch was again decidedly disappointing. All *Dipodomys ordi.* Saved a half dozen, packed up and left shortly after 6:30 a.m. On the way north from Camp Verde I saw several likely looking places and shall try my luck again some time.

Arrived at Prescott about 10 a.m., bought supplies then on to Kirkland Junction.

November 14 - Decmber 20, 1939

Huey with Charles Harbison

Organ Pipe National Monument, Arizona

November 14, 1939

I left San Diego in Museum truck about 8 a.m. bound for Organ Pipe Cactus National Monument to complete the vertebrate survey started last February. Picked up Charlie Harbison at his home in National City.

Flowers over sand dunes on desert east of Holtvill were out in splendor.

Arrived in Gila Bend at dark and after dinner at Jake Millers drove until the gas tank went dry about 80 miles from Ajo. Night clear and crispy cool. Heard Horned owls hooting nearby.

November 15

Early start to Ajo where car was gassed and some few last supplies purchased.

Near the north boundary of the O.P.C.N.M. found a side-winder crushed in the wheel tracks of the road. Must have been run over last night as the reptile was perfectly fresh but too badly smashed to save for a specimen!

Saw a number of Vesper sparrows in the dried grass - creosote association. 1 specimen taken proved to be Western.

Arrived at Bates Well about noon, spent an hour talking with the Grays. They told me that heavy fall rains had fallen and the country side looked like it for it was decidedly spring-like.

Went hunting after lunch, found numbers of Brewer sparrows, saw several Red-shafted flickers, a pair of Mearns gilded flickers, a pair of Gila woodpeckers, several phainopeplas (but not abundant as in spring time), 2 Green-tailed towhees, a half dozen Ruby-crowned kinglets, many Desert quail, 2 pairs Canyon towhees, a pair of Crissal thrashers (1 collected). Shot a Canyon wren in a slide of lava rocks near the main wash.

Saw fresh peccarie tracks. They were made by an old sow and two tiny young. The tracks of the latter were about 3/4 of an inch in length.

Harbie set a line (48) mouse traps up the rocky slope of lava rocks south east of camp. 4 Schuyler rat traps were set near woodrat nests.

November 16

Mouse traps held 7 *Peromyscus eremicus*, 3 of which were small young, still in bluish pelage, 4 *Perognathus inter-medias* and 1 *Neotoma albigula*.



Near camp I saw 1 Cooper hawk and shot 1 Red-shafted flicker and a Cassin vireo. A pair of ravens were heard about camp during mid day. I had the birds from yesterday afternoon's hunt to prepare so did not leave camp. Harbie went "bug hunting" up the wash.

In the evening I set my flash trap nearby and Harbie set 2 steel sets for carnivores, baited up the mouse traps and caught insects by lantern light until 9 p.m.

Hard Screech owl calling well up on the mountain side in the giant cactus.

November 17, 1939

Mouse traps held 4 *Peromyscus eremicus*. Steel traps and flash trap untouched.

I hunted on the lava slopes south of camp. Saw a few Gambel sparrows, several flocks of Brewer sparrows that had gathered in a few Desert sparrows. This is a common thing during the winter. Saw 3 Red-shafted flickers, a pair of Mearns gilded, several pairs of Plumbeous gnatcatchers, paired as usual, and a Cooper hawk again. A single pair of Mourning doves has been seen around the corral these two days and appear to be the only doves about. Quite a contrast to the population of last May.

Turning northward I hunted up the wash north of camp. This wash was not large but ran up towards rocky hills and into the giant cactus-creosote association. Several small flocks of mixed Desert and Brewer sparrows were seen and 3 House wrens (1 collected), a pair of mockingbirds and 1 shrike (collected). A pair of wild Sparrow hawks kept at a safe distance were seen in the giant cactus.

Arriving in camp about noon I shot a Red-napped sapsucker. Several Ruby-crowned kinglets in trees about camp and a single Gray flycatcher and Chipping sparrows from flock of 8 or 9 were collected. Few phainopeplas but not abundant. This I believe due to the lack of mistletoe berries this fall.

The Gray boys told me that Jose Juan killed an antelope during the summer and that they had not seen the pair on the west side since. Probably old Jose is a tough predator on large game.

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Note pages for Nov. 18, 19, 20, 21 and 22 missing.

November 23, 1939

Early this morning just after Harbison had left to look at his traps another Woodhouse jay flew over camp. I later got a chance shot at it but missed. This is the second occurrence of this species here in the past few days. Several large bunches of Brewer and Gambel sparrows were seen with the usual mixture of Desert sparrows and gnatcatchers. Kinglets were abundant and several Green-tailed towhees were seen.

Heavy clouds have been overcasting the sky for past few days then clearing. Today they failed to clear and rain began falling at noon continuing until well after sunset.

I was unable to get the spotted skunk skinned that Harbie brought in this morning so buried it until tomorrow.

Just at sundown about 30 Brewer sparrows went to roost in a mistletoe clump in the mesquite tree near camp.

November 24

The sun rose in a clear sky this morning, everything damp and crisp with a 40° temperature.

Went hunting after breakfast. Steel traps untouched. We took a rope and recovered a desert tortoise from a prospect hole near the base of the lower hill in the pass. While in the hole Harbie found 3 toads. Turned rocks on hillside for geckos. Birds were as usual no new arrivals - lots of Brewer, Gambel and Desert sparrows, gnatcatchers and kinglets. Saw a single Sharp-shinned hawk and a pair of cardinals. Saw a Marsh hawk flying past camp at noon.

Harbie set short line of mouse traps in creosote nearby.

In late afternoon saw Hermit thrush near camp and about a dozen juncos, all appeared to be Cassiars (?)

During night 2 Horned owls were heard hooting.

November 25

Did not go hunting this morning as I plan to go to Ajo after lunch and have a few specimens from yesterday to prepare. Shot the Hermit thrush seen yesterday, as it fed on ground near camp.

Harbie's traps held 1 Dipos. merriami and 2 Perognathus penicillatus.

Mr. Supernaugh, custodian of the monument, drove in about 10 a.m., had lunch and left about 2 p.m. upsetting plans. I had to rush to Ajo not getting back until long after dark.

November 26, 1939

Packed up and left at noon for Quatovaquita. As we were leaving a tiny Horned toad was found by the roadside and a Red-tailed hawk and Golden eagle were seen circling overhead towards the Growler Mountains.

The fall rains had changed the road bed considerably and where we had found smooth going last spring ruts and washes were present.

About 8 miles north of Los Pozo a single Leconte thrasher was seen. I pursued but couldn't again catch sight of the bird. This section of the Monument, that is the s.e. part of Growler Valley, is the only locality this species has been recorded in the Monument. This instance being the 2nd record.

Several very wild shrikes were noted as we drove along.

Arrived at Quintavaquita about an hour before sunset, put up our tent and went down to Jose Juans for a couple of buckets of water and to look the small pond over for birds.

A flying Vermilion flycatcher and a single Black phoebe were seen feeding over the pond. 3 Audubon warblers and a small covey of quail were the only birds noted. Rather disappointing to say the least.

Insect collecting looked very bright as numerous butterflies were present and gave Harbie many thrills. The overcast sky gave every promise of showers during the night so prepared for rain.

November 27, 1939

No rain fell during night but sky still overcast at sunrise.

Went hunting down by the pond and cultivated garden. Birds scarce. 1 male Vermilion flycatcher and three others that were probably young of the year. 1 Black Phoebe, small band of Gambel sparrows, 3 Lark sparrows, 6 Meadow larks. Shot 1 Mearns gilded flicker, saw 1 other, shot 1 Red-naped sapsucker that was pecking at limb of cottonwood tree. Much old sapsucker scaring was present proclaiming the regularity of this species each year

Hunted up desert wash. Saw several Plumbeous gnatcatchers, a dozen verdins. Roadrunner tracks in sandy wash. This seems to be the only way this bird is to be recorded. Their distinctive tracks seem to be everywhere yet the birds are so shy that they are seldom seen.

Returning to camp I caught an adult Cooper hawk bathing in the edge of the pond. Before I could raise my gun it was off and later flushed from tree and missed with hastily pulled shot.

Small band Gambel quail (25), killed 3 with one aux shot. Saw 2 very wild shrikes but couldn't get within gun range. Pair of ravens about.

Shot Cactus woodpecker as it was extracting insects from rotten palo verde limb in brush fence.

Altogether collecting birds was rather poor today but Harbison is finding insect collecting excellent.

November 28, 1939

Dawn broke with a stormy sky and we were barely able to get our breakfast when rain commenced to fall.

It was nearly noon before I got out to collect. Birds were scarce. Shot a dark brown Song-sparrow from a mesquite near the shore of the pond. Looks like another Arizona record.

The small bunch of 12 doves (Mourning) were flushed from the field and the small bunch of linnets were seen in the mesquite-cactus nearby. 6 killdeer were in the newly planted wheat field. The Vermilion flycatcher was feeding over the pond and his female and 2 young were along the fence near the fields. Took a shot at the lone Black phoebe and saw 2 Say phoebes in the cultivated fields. 6 Meadowlarks also, got one of them.

Saw a Red-tailed hawk and pair of ravens. 3 Vesper sparrows in the fields, very wild. Several Plumbeous gnatcatchers and a House wren along desert wash. Saw 2 Sage sparrows, shot 1 near camp. Also Crissal thrasher and Abert towhee in iodine brush near spring. This is the only spot in monument where this type of shrub seems to grow.

November 29, 1939

Sky still filled with fleecy clouds at sunrise and continued so until late afternoon.

Hunted down by the cultivated area today. Birds fairly common. Saw Red-tailed hawk, many Gambel sparrows. The same Mourning doves seen on previous days. Found several Vesper sparrows, shot 1. 2 Ash-throated flycatchers, both collected. Shot 2 Savannah sparrows from flock of 8 or 9 feeding in a grassy plot, both were different forms. - 1 Chipping sparrow taken from a flock of 10 - 12. Saw several Ruby-crowned kinglets, 1 collected. Several Audubon warblers, 1 collected.

Found two fresh gopher diggings in cut over corn field set traps and in 20 minutes had one fine old male. Other trap untouched at sunset.

Storm completely passed over at sundown.

November 30

Dawn broke clear and cool. Went hunting past pond and into cultivated fields. Birds scarce. saw small bunch of Brewer sparrows, 2 flocks 20 or more in each of Gamble sparrows. 1 each of R.S. and Gilded flickers, 1 female phainopepla and the usual Vermilion flycatcher and Black phoebes at pond.

Saw 3 House wrens (1 shot) along brush fence and 2 Green-tailed towhees. These latter birds seemed to have come in since the storm.

Saw a lone Cedar waxwing in the pomgranate grove and shot it. Pair of ravens about as usual.

Gopher trap untouched so picked it up.

Packed up and left for Bonito Well about 3 p.m.

Arriving about 4:30. Pitched camp and while I set my flash camera Harbie set a line of mouse traps through creosote brush and stony ground.

December 1

Heard Screech owl pop-pop-popping during night. The mouse traps held 7 *Dipodomys merriami* which are to be used for trap bait this evening. My camera was fired during the night probably by a coyote as tracks were made by that species where the bait was placed.

Saw a lone robin and pair of linnets near windmill this

morning. Birds did not appear to be numerous and shall probably have a difficult time getting specimens.

Went hunting south-east of camp. Followed several good-sized washes that were heavily brushed with ironwood, some mesquite and a number of shrubs, catclaw, jumping bean and buckthorn.

Birds were scarce. Found 2 small mixed flocks of Brewer sparrows and Desert sparrows but did not shoot them. Gambel sparrows were found sparingly and only in pairs and singles.

A strong desert east wind was whipping down the valley and was without doubt the cause of the apparent lack of birds. Saw a lone Cactus wren and a number of nests in the cholla but they are not nearly as abundant as one would expect in this cactus filled region. Saw a Palmer thrasher but did not get a shot.

Found 3 small bunches of Desert quail, getting  $\frac{1}{2}$  dozen for food and bait. Jumped a Horned owl from his roost in a dense ironwood and was able to creep up on and shoot him. This is the first specimen I have been able to get a shot at in spite of their being very numerous and heard almost every night.

A few phainopeplas were noted in ironwood especially where mistletoe was present. Shot 1 female, also 1 mockingbird.

Set 2 gopher traps in fresh burrows about  $\frac{1}{2}$  mile from camp.

Saw 1 Green-tailed towhee near well. A new sign on the corral gives this place the name "Rancho Bonto" which is much more applicable and will probably be adopted for good.

Harbison had been off exploring the main wash north east of camp. His route had taken him a mile or more up stream when he decided to investigate some precipitous crag that topped a nearby mountain. Up there he found a number of plants that were of interest and a lot of fresh mountain sheep sign in some caves. He found the head and horns complete of a recently dead mountain sheep ram. Other bones of the beast lay scattered about. From what he told me and from the size of the head and horns which he brought in the animal must have been shot. Whether white man or Indian couldn't tell but the evidence seemed clear that the skin and boneless meat had been taken.

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On his way home he came onto a peccary and her two tiny young. This old sow ran away and left the babies which Harbie caught. His attention was first called by the screaming and squealing of the young. These he caught and wrapped in his shirt and to his extreme surprise the old pig ran away and deserted the young. Contrary to many current tales of the ferocity of this beast in defending its young.

Took pictures of the young this afternoon and looks like a feeding problem from now on.

Made two steel sets near camp this evening. Harbie set line of mouse traps near camp.

December 2, 1939

During the night the two peccaries crawled out of their box and Harbie was out at 4 a.m. heating food for them. One died later.

The flash trap fired again last night. Tracks look like coyote but cannot tell.

Mouse traps held 3 Dipo. merriami.

Went hunting up the wash north east of camp. Birds scarce. Shot 1 more Solitary vireo.

As I was stalking slowly up the wash I approached a huge ironwood tree that was growing in the wash. Brush had concealed my approach. When within a rod of the tree I heard a sudden rush from the lower limbs and was surprised to see a gray fox running across the wash. A charge of #4 shot was too light to kill it but turned it from that course of escape into another. The beast had evidently been sleeping in the lower branches of the tree and had not heard me approaching.

Rebaited the steel traps this evening and rebaited the flash camera.

Sky clouded over and looks like another storm brewing.

Little pig has become very tame especially to Harbie. Seems to be quieted by his presence and when he leaves camp his sweater in its box keeps it from yelling. Follows him about like a little dog.

December 3, 1939

Steel set held a large male gray fox this morning. Flash camera not sprung. This fox must have been the photographic subject during the past 2 nights.

Mouse traps held 2 *Dipodomys merriami*. Good bait for our steel trap.

Hunted down the main wash this morning. Saw a bright red male cardinal. Too close to shoot at and when I stepped back for range he got away.

Saw 2 roadrunners, shot 1. Numbers of quail, several flickers, 1 shot. 2 Cactus wrens, 1 shot. Several Crissal thrashers, phainopeplas, 1 Palmer thrasher - shot. 1 mockingbird shot, 1 Cactus woodpecker, several Gilas. Saw peccary tracks in wash. These animals are extremely shy as I have yet to see one myself.

Harbie took 10 Schuyler rat traps and 2 small #1 steels and set out for the cliff country again this morning. He seems to be untiring in his efforts.

December 4

Harbie and I got an early start up the mountain to look at the mountain sheep skeleton. He had 8 Schuylers and 2 small #1 steels set amongst the rocks near the summit. The Schuylers held 5 *Neotoma* and the steels were empty.

Near the cliffs I saw several Rock wrens and one dotted Canyon wren.

The skeleton of the mountain sheep lay in an alcove in the cliff. The position was such that the direct rays of the sun even in summer would have hit it but a short time each day. This fact explained the reason the skull and horns were in such perfect condition.

The cause of the animals death was not determinable but it did not look as though it had been shot. Possibly it was as Harbie had first said the beast had fallen over the cliff. This in a way did not seem to completely explain the case, however, for the carcass lay rather under the top of the cliff and not directly below as it would have to have fallen. That an animal in its prime should slip and fall does seem a bit improbable. At any rate the cause is a question unsolved.

On my way back to camp I shot a Cactus woodpecker and a Palmer thrasher.

Harbie set a short line of mouse traps near camp and re-baited the steel sets at sundown.



December 5, 1939

Hunted through the more dense chaparral by the washes west of camp. Saw 1 Crissal thrasher, many Brewer sparrows, Desert sparrows, Gambel sparrows, several pairs of both Plumbeous and Western gnatcatchers. The pair of cardinals came within a few yards of me as I stood quietly watching them. I got another Cactus wren and saw several others. This bird seems to be more common here than any other place in the Monument.

Phainopeplas are fairly numerous and are always congregated in the upper branches of the mistletoe bearing trees.

A pair of ravens hung about for an hour or so. I shot at them with buckshot to drive them off for fear they might get into our steel traps and tear up the set.

Set my flash camera again this evening. Harbie ran a line of mouse traps over the rocky mesa and set another steel set in the wash. This makes 4 sets we have out but are having very poor luck. Coyotes are heard almost every morning and tracks are seen on the road but they all seem very trap shy. Probably due to continued trapping by the Mexican and Indian farmers.

December 6

No luck with steel traps or camera. The mouse traps held 4 *Peromyscus eremicus* and 2 *Perognathus intermedius*.

I hunted again over the same region worked yesterday. Shot 2 Costa hummingbirds that were feeding on the Belaperomy???. This plant is in excellent flower at the present time and its red blossoms are extremely attractive to hummers.

I took 2 long shots at a Marsh hawk but missed. Hunting was very poor and saw nothing of interest. Saw the same old line.

I walked about 3 miles down the wash then out over the creosote cactus flats looking for antelope jack rabbits. No luck. Harbison saw one day before yesterday on the rocky mesa north of camp and I hope to collect one for the western-most record.

Near camp I shot a cottontail. This species seems very scarce and have seen but one or two since we arrived. This probably explains the scarcity of large carnivores as no rabbits no food.

Saw a Cooper hawk and a Red-tailed hawk near camp.

After lunch I hunted south east of camp. Saw a Desert black-tailed jackrabbit but no antelope.

Shot at a Cactus wren but in a 4 mile walk I found not one thing that I wanted for the collection. Desert sparrows and a few Brewer sparrows were the only birds noted.

Rebaited all steel traps again this evening and if we don't make a catch in the morning we will move to another camp.

December 7, 1939

Caught a large male wild cat in set using old fox carcass for bait.

After lunch went hunting out over the desert in search of antelope jackrabbits. No luck. Shot a Sage thrasher and saw another pair of cardinals. This makes 2 pair for the immediate environs of Rancho Bonto.

Caught moths all evening. A heavy flight of very interesting species was on and Harbie wanted all he could get.

After we had got into our beds the Screech owl was heard again in the palo verde near camp. So out I hopped and soon, with the aid of my flashlight had a nice specimen. Heard another some distance away but too far to go after.

December 8

Traps were empty. We are getting pretty tired of this poor trapping so are expecting to pack and leave.

Had one more very desperate try for antelope jacks again today. I walked almost to the Mexican boundary over very good territory but no luck. I saw several places where peccaries had been and a single bright red male cardinal about 3 miles south of camp. Found fresh deer tracks and plenty of scats but probably made too much noise to get within sight of them.

Saw a Marsh hawk, Sparrow hawk and 3 Black-tailed jackrabbits, getting 1 of them. Also shot 1 male Mearns flicker.

The usual lot of Desert, Brewer and Gambel sparrows were seen along the washes.

Baited all traps again this evening.

December 9, 1939

Packed up and left Rancho Bonito about 1 p.m. Saw a pair of Red-tailed hawks over the valley.

We plan to stop in the southern end of Growler Valley to make a desperate try for Leconte thrashers.

Watched for suitable camping site and finally stopped near the main wash that drains the Ajo Valley and passes near Bates Well, about 2 miles out in valley.

Saw single ~~leuc.~~ meadowlark near where we camped.

Set out 2 steel sets and while I put out the flash Harbie set a mouse line.

December 10

Steel sets held a fox this morning, the mouse line a single *Dipodomys merriami*.

Harbie went collecting up towards the hills while I went out onto the main valley floor.

I found a lone Lark bunting perched on top of a cholla.

Flushed 3 Long-eared owls from their day roost in a grove of mesquites, got 1. Saw several very wild shrikes, 1 shot. Heard several Cactus wrens singing, looks like they were beginning their spring courtin song.

While hunting for a quail supper I flushed a Screech owl from a mesquite and got him.

Rebaited our steel traps and made a set with the fox carcass.

Harbie found a *Dipodomys deserti* colony and we set 13 traps in it by lantern lights.

Heard Horned owls and coyotes during the night.

December 11

Traps empty and *Dip. deserti* wouldn't take bait. Too much natural grass. Yesterday Harbie said he had seen 2 Leconte thrashers., so we went hunting up onward to hills in hopes of getting one.

I did not see one but did get a Cactus wren, 1 Palmer thrasher and 2 Lark buntings. The latter were robbing mistletoe berries from a phainopepla who was doing his best to drive them out.

On my way back to camp shot a jack rabbit.

Harbie saw one Leconte but it was too wild for him.

I saw a very wild shrike. They seem more abundant during the wintertime due probably to the migrants from the north.

Brewer and Desert sparrows very abundant, also due to winter invasion from more northern localities. Saw 1 Marsh hawk and 1 Sparrow hawk. Lots of quail at this locality.

Packed up and left for Ajo to have the car repaired, purchase a few needed supplies and after that one last collecting station - Alamo Canyon in the Ajo Mts.

When we arrived long after dark the move was too much for Harbie's baby javelina and it died during the night.

Mr. Gray was in his house when we arrived and I chatted a little while with him. He gave us an old white horse that had gone totally blind to kill for coyote bait.

December 12, 1939

Mr. Supernaugh came in this morning and spent the day with us. Harbie brought the old white horse down off the hill and we killed it at a point about  $\frac{1}{2}$  mile north of the mouth of the canyon. 10 blind coyote sets were made near the carcass.

Saw a Prairie falcon flying over the canyon.

Harbie set 5 Schuylers for woodrats and I coached Mr. Supernaugh on birds until dark.

December 13

Coyote traps untouched. Bait untouched. Harbison went around to Grass Canyon and didn't get back until almost dark. I set out my trap camera up the canyon. Shot 3 birds - 1 Spotted towhee and 2 juncos. Saw a roadrunner and a pair of W. raven around camp today.

Saw small bunch of quail, 2 Palmer thrashers, several Rock wrens, many Ruby-crowned kinglets and a pair of Cactus wrens.

Mr. Gray rode out on the flats about the mouth of the canyon and saw 1 male and 1 female black-tailed deer. He said the buck was a big one.

Went up the canyon to set my flash camera. Shot 1 spotted towhee and 2 juncos.

Harbie came in about sundown after a long walk that led a circuitous route up Grass Canyon and down into Alamo Canyon.

December 14, 1939

Coyote traps held a raven but no coyotes. The old horse is beginning to smell very potently and should draw coyotes.

I hunted up the canyon this morning. Saw another Spotted towhee but couldn't get a shot. Juncos were abundant, several kinds. I shot 3 and found them to be all different varieties. Killed a single female Broad-tailed hummer which I believe to be an Arizona winter record.

Saw 2 male cardinals, many Chipping sparrows, a few Gambel sparrows and several Green-tailed towhees. Ruby-crowned kinglets were abundant. Saw a pair of Sparrow hawks.

Mr. Supernaugh came in about noon and we all went over to Gunsight Mine to visit a short time with Mr. Butler. He has been watering and feeding birds for several years and has a nice cement bird drinking pool near his front door.

Saw many linnets and several Chipping sparrows drinking.

Near the main entrance of the monument I saw a Vesper sparrow and a pair of Golden Eagles were seen soaring over the valley as we were going out. Returning to camp the whole air of Alamo Canyon seemed to be filled with White-throated swifts. There were hundreds of them all too high to shoot at.

Reset my flash trap and Harbie set number of Schuylers on the south wall of the canyon.

December 15

Hunted up the canyon into the rough brushy country above the falls. Juncos of several varieties were numerous. Shot 2 Black-chinned sparrows, saw many more. Shot 3 Chipping sparrows, many more present. Kinglets (Ruby-crowned) were abundant. Saw Cooper hawk.

Found mounds that I think are gophers and shall try for them ~~tom~~ tomorrow. Heard Horned owls hooting during the night.

December 16, 1939

Traps set about the old white horse carcass held a coyote this morning. Bill Supernaugh came out early and we all went up to the valley above the falls.

This is surely Upper Sonoran Zone and the dense cover of squirrel nut bush (Jojoba) is one of that zone's clear indicators.

Saw many juncos, a cardinal and several Rock wrens. A very tame Canyon wren came up to Bill.

Harbie caught on a bush while descending a canyon and I nearly broke my arm and leg. Back to camp at sundown with the day a total loss. I had set a trap in the hole found yesterday and the animal had plugged it so reset and Harbie will look at it tomorrow.

December 17

Another coyote this morning. I am so lame that I will have to stay in camp a day or two. Harbie went up the canyon this morning and spent the day.

The gopher trap was plugged again so he reset and left it. He killed a large rattlesnake that he found sunning itself on a rock. Hit it over the back with his butterfly net handle.

Het set a line of traps again this evening.

December 18

Coyote traps undisturbed. Rat traps held 3 Peromyscus and 2 woodrats. Hunted up canyon this morning, saw a number of juncos and mixed flock of Black-chinned and Chipping sparrows. Saw 2 hummers shot 1, proved to be Selasphorus platycercus. Heard several more that I didn't see. Saw cardinal.

Set line of rat traps out on flat for Dipodomys spectabilis this evening. Heard Screech and Horned owls near camp after dark.

Flushed poorwill on road as we drove home after setting traps on flat. Was dark and could not catch his eyes with head lights again.

Picked up 2 horned toads near the corral, one large and one small.

December 19, 1939

Dipodomys traps held 4 adult specimens this morning and the coyote traps another specimen, a female this time.

After getting up the specimens we packed up and left for home.

Spent the night 20 miles east of Yuma where we arrived about 11 p.m.

December 20

Arrived home after an uneventful journey at 5:30 p.m.

Central Lower California, Mexico

April 9 - April 15, 1940

Huey with Mr. and Mrs. Griffing Bancroft  
and Charles Harbison

Last part of notes missing.



April 9, 1940

In company of Mr. and Mrs. Bancroft I left San Diego in new Museum truck at 8:30 bound for central Lower California. Picked up Harbison at National City. He followed in his Model A.

After a short delay in Tiajuana getting our papers in order we left at 10 a.m.

Arrived at Ensenada at 1:15 when we had our lunch in the Chinese restaurant.

Followed well graded rough dirt road until reaching Santo Tomas where all contour roads ended and Bumps began.. Truck working well.

Made camp for the night on inland road about 8 miles east of San Vicente.

April 10

Out early this morning and after towing Charles' car to start it, our route led into a long marshy valley. Saw 6 L. scoup ducks and a pair of coots in a small pond.

Stopping at Meling Ranch in Arroyo Seco. Saw Cliff swallows building nests on tower platform of windmill. A pair of Black phoebes and many migrant Gambel sparrows. A half mile down the canyon a pair of Red-tailed hawks had their nest in a cottonwood tree. Both birds were nearby.

Saw a pair of Marsh hawks copulating on the ground a short distance further along.

Filled gas tank at St. Domingo thence ~~on our way~~ over the long San Quintin plain.

The road rough but machine acting perfectly. This driver gets but little chance to look about over these rough roads, so observations are few.

Made camp for the night in canyon about 2 miles inland before reaching ~~Sxxx~~ Soccoro.

April 11

Bancroft found nest of San Fernando Ladder-backed woodpecker with 5 eggs. It was in the stem of a nearly dried yucca.

A dense fog hung over the landscape making everything drippy wet and we had to roll our beds before they were dry.

At Soccorro, which was only an adobe shack badly in ruins a pair of ravens were sipping nectar from the newly blooming yucca. This is the first time I had ever seen this bird drinking of this honeysweet juice, which is so abundantly produced in newly blown yucca flowers.

A lone Duck hawk darted past as we passed near the ocean shore. Saw a dozen gulls but none wore bands.

Gassed up again at El Rosario and drove on. Stopped for lunch in Ajiquito Canyon where Mrs. B. found two sets of Desert sparrows and Griffing found a San Francisco flicker with young.

Reached Aguacito about 2:30 and had the misfortune to slip off the grade with my truck.

Charlie started to walk to the Onyx 47 miles distance at sundown.

April 12, 1940

Three travelers came up this morning and after 2 hours labor we were able to extinct the truck from a difficult situation. Caught up with Charlie at San Fernando where he was all in.

Arrived at Onyx about 5 p.m. and were treated royally by Mr. and Mrs. Kenneth Brown.

Heard the two evening radio news broadcasts which will in all probability be the last we hear until our return 2 weeks hence.

April 13

The new truck had turned over its 299th mile upon arriving a Onyx so changed its oil.

Left the Browns and the Marmol about 9 this morning over a new route across the mesa south towards Catavira Canyon. The region was covered with scattered cardons and cirios and a few mesquites along the washes. Birds were scarce, an occasional flicker and Cactus wren being seen. However, the truck driver has little chance for observation as his entire attention is with the driving.

Our route led into Catavina Canyon several miles eastward of the old route. Many fan palms (the tall slender spears) were present and all had been burned off.

A small settlement of 3 or 4 houses reposed in the rather narrow mesquite filled valley and some surface water was present, terribly polluted with cattle.

Two windmills were piping water into a small tank and we replenished our canteens and tank. A few miles beyond this point, that is south, the roads converged into the regular route and a short distance beyond we passed the camp where Aunt May and I had collected 12 years ago. It looked exactly as we had left it.

Juarez hill was as terrible as it had always been but we made it, bouncing from rock to rock in compound gear.

Camp was made near Chapala dry lake on the site where Quail Sam and I had stopped in 1930.

Birds were not common. Saw a few migrant Brewer and Gamble sparrows. Both Harbie and I were sick this evening.

April 14, 1940

Rains during the winter had made a quagmire of Chapala and we had to go around the eastern end. Seems like there is no relief from the continuous bumping of an extremely rough road. We arrived at Punta Prieta about noon to find our 2 drums of gasoline had not as yet arrived. So on to the beach at Santa Rosalia Bay.

We had our lunch a mile east of San Andreas. The rough roads seem to absorb almost all my time and chances for observation and it is but few chances I have to look for birds.

A cold wind and overcast sky greeted us at Santa Rosalia Bay and every one was grateful for sweaters. Made camp near old stone corral and all went out for the two hours left in the waning day to collect.

I set a line of traps through the sand dunes about 1 mile west. Saw an osprey, 2 pairs of Sage sparrows and a pair of shrikes. Harbie had gone up the small canyon that rose to the mesa from camp and when he didn't show up at sunset we all commenced to worry. By 10 p.m. he hadn't shown up so we left the parking lights burn on the truck all night.

April 15, 1940

It was a worried three that roused themselves at the crack of dawn this morning and after a hasty breakfast plans were made for any contingency.

I set off up the canyon and shortly after getting up on the mesa found Harbie headed towards camp. He had been hopelessly lost and had wandered around in circles about half the night.

Normal balance returned when he got to camp and I set out to pick up my traps.

My catch consisted of four Perog. eremicus, 2 Peromyscus m. coolidgi and a Dipodomys merriam which I sat down and prepared while Griff and Mrs. B. hunted for thrashers in the sand dunes to the westward. Charlie drove up to San Andreas where collecting in his lines was much better.

We packed and left about 1 p.m.. Again at Punta Prieta we learned our gas was not in.

Left to the eastward bound for Los Angeles Bay. An impending storm with wind and clouds gave a threatening appearance.

Our route led through one of the most luxuriant forests of mixed cirios and cardons I had ever seen and when the evening sun broke through the clouds we stopped to make a picture.

At a point 13 miles east of Punta Prieta the truck stuck in the sand and dug in.

Night was fast falling so Harbie and I set out our traps and we made camp for the night.

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End of notes, last part obviously missing.

May 8 - May 16, 1941

Huey with Charles Harbison

Western and central Arizona

(part of notes missing)

old fm

May 8 - 1941

Left San Diego in morning at 9:50 a.m. picked up my companion Charles Hardson entomologist of the Museum. He slept at his home in National City and ~~left~~ started out on the first run of a trip into western and Central Arizona.

Travelling until 3 a.m. camped for the night 5 miles west of Yuma.

May 9 - 1941

Up after 2 hours rest and soon on our way. Morning pleasantly cool during the 1st. drive at Yuma we turned north on the Quartzite road. Landed for the 5 H. in Kofa Mountains. The locality is within the Kofa National Wildlife Refuge so after bird collecting we had dinner at a small manure of which the report of pocket gophers by the hotel is the primary object of record within the area.

Found a Mr. Gail Wellborn, who resides at this time in Berkeley and obtained a good account and

May 9-1941

road direction of the area. He  
has had cattle in these mountains  
for many years and gave us permission  
to camp in his cabin.

After crossing a vast desert valley  
the route led up a gradually rising  
wash to a CCC camp.

From this locality the road, across  
at dusk, led up into desert hills  
and gullies paralleling the main  
trunk of the mountain chain, the  
general direction of which was N-W to  
S-E.

After about 20 miles of such  
travel we came to the comfortable  
cabin located in a rather open  
canyon bounded by rounded knolls  
and hills.

The whole section through which  
we had traveled was checked with  
spiny pines while there were not  
less than two water points. The peak  
they were still beautiful and  
indeed several have been beyond  
disruption.

Birds were not numerous  
about the ranch but a pair

May 9-41

2

Damity from parent. Water in a cotton tangle and a large tank nearly which was pumped into by a small windmill pump from a truck for the air in search.

about a dozen larks, several Black-throated chick-sparrows, a pair of Cactus Kingbirds (young of the year) 1 pair of Mockingbirds (that I caught in the moonlight, it being the time of full moon).<sup>a</sup> Then a pair of about 9 o'clock of White-winged doves ~~not~~ <sup>at night</sup> and a pair of same parent pair of Song Sparrows perched to be the sleeping birds.

Later in the afternoon an adult ♂ Scott Oriole was seen in the scabbles on the hillside. It did not seem to be a resident of the neighborhood and was alone of its kind.

Tenants living in number of many places around up the canyon probably to watering places higher up and a line of Mexican Flickers which swept across the top of the mountain of small 15 ft ~~sage~~ <sup>sage</sup> stalked bushes.



May 9 - 1951

Giant eels were grazing on the  
Philadelphus and some where in  
Thorn creek. These flickers killed  
them here.

At dusk a low roar like  
came on and later the voice  
of an Elf Owl was heard. This  
later and kept up its chattering  
all night from some of vantage  
points about the premises.

Fourch and Hardy and I  
set out lines of more traps.  
40 traps were placed on the  
hillside south of camp and  
Cuasate, Ocotillo, jayoka and a  
family hamstead of grasses and  
animals.

I set 35 traps. Through the  
old garden plot, was a mass of  
muntiac and up a rock with  
where Cuasate and straight headed  
cactuses were growing.

As we drove into our camp  
about noon a most peculiar  
incident occurred.  
The front of the truck was

May 9-1941

driven into an open shed for protection and I had only just gotten out of the truck when Hardy called out that a stream of gasoline was spraying from beneath the car. Quick examination revealed a hole in the gasoline tank. Hardy stopped it with his finger which I whittled a wooden peg. When I drove this into the hole a second one appeared.

~~Close examination~~ While I drove a peg into this one Hardy got one with his teeth from the road and began looking for reptiles in which to store the fluids. In all we saved but 7 gallons of the 17 that was in the tank when we left Hope.

Close examination revealed 2 more round "1/4" and "1/16" holes - That had him "board" into the tank and filled with "smooth on" on some of the iron solder without quantity double L. I. O. Salvage at the factory = news we were

May - 9 - 1941

in a pinch about 40 miles  
away from help in an isolated  
about spot. It later to get my  
claws into the guy that checked!

May 10 - 1941

Our traps were a disappointment  
fully caught 1 species a fine  
adult Perognathus harrisi. While  
I caught 2 perognathus, a minor  
and 2 Dipodomys deserti.

After preparing my specimens I  
investigated the region west of camp.  
Search was made for gopher signs  
but not one single trace of them  
present could be found.  
Thin willows were well common  
with grass and the shrubs were  
covered with clinging flower stalks  
now in the process of dying.

Two weeks ago there were not here  
large a catch of any

Several small surface runways  
that soon must dry when found  
along the creek but yet birds were  
not numerous a pair of turkey

May 10-1941

Watercress whiffed around and the whining song of a catbird was heard from a catbird covered slope. A pair of vesper sparrow sang as though worried about my proximity but so much as I did I could not find their nest. Mark him in camp on the way.

A lone male western Tanager and a Rump backed Thrush were seen near the largest cypress. Hardy explored the canyon Tanager the nest and found the spring place further on. The bird was a few paces away with my attention.

We set all of our traps tonight. Hardy's up on the spring rock covered side hill south of camp and mine up the ravine and one the jagged brushy slope north of camp.

Things the early evening 1st. Sparrows entered and all night long. Elf Owl chirped and called from Vantage points all about. One little fellow kept

May 10-1941

Checking at us from the first  
reasonably cool I have in several  
times in the bright moon light.

May 11-1941

Our trap line was again dis-  
appointing. Hardy's held two Peromyscus  
leucurus and a Perognathus interior  
while mine held two Peromyscus sonoriensis.

Since I set traps set about

Camp held woodrats M. obsoletus  
after lunch I walked down

the canyon a mile or more searching  
for Siphonotus and investigated every  
alluvial sand bar and several  
alluvial silt flats. I don't see Siphonotus  
signs. Apparently the specimens  
not occur here but on cut banks

near the water course show no  
holes. This is an even deposit all  
signs of thin running water when  
first working cannot be found.

Hardy took a blackbird in  
Linton and sack of traps  
by the canyon this evening while  
I set a line of 44 traps along

Found a modest nest with one fresh  
egg and it was located in a Scaevola  
bush near the streambed. Also saw  
a pair of Ark. Throated Flycatchers and  
two pairs of Crissal Thrushes.

My giant birds were seen  
a single Black-throated Gray Warbler  
and a Male Townsend Warbler  
a lone Western Flycatcher and  
a white crowned sparrow was  
found.

May - 11 - 1941

The west side was empty.

Several times during the night I heard quail were heard calling. This single noted night call in the bright moonlight and the Elf birds were calling so frequently.

Found 3 more toads in the small water trough as they of last night two clasping ones were singing loudly at the same time.

May - 12.

My traps were entirely empty. It appears that the Temperate zone of the past few months have chased out the small mammal life along the west side. From the results of the past few nights the side hills have population has also been decimated by floods.

Hardy had better look up the canyon - his catch was 3 prairie dogs and one of the small lizards.

He also captured a rather small white bird after wheeling it back with a stick, getting it into a paper bag.

Harley went up canyon rimmed sides today & explored the base of Squaw Peak a huge moraine that stretches out sharply in the west horizon. Saw 2-3 years old Mt. Sheep eat very close range > 140 yds. The community walked away so he watched them.

May 12-1941

During the morning the ♂ Scott arrived from new camp. I decoyed him usually imitating his mimicked call until he was within a foot of me, when upon discovering his mistake he took wing with alarm and flew over the hill a lone Red Tailed hawk flew over today. Two Linnards kept circling about and seemed to affect the hawk.

②

We set our two traps lines over the rocky hilltops this morning.

Later on I collected an Elf owl.

May 13-1941

Our trap line held the last catfish so far taken but still far from satisfactory.

Harley caught 1 Perognathus interpres and several Peromyscus eremicus & 6 Schizoper caught 4 Neotoma albigula. My traps caught 2 Perognathus laevis and then Peromyscus eremicus. On my way back to camp I



May 13-1941

Two Present-backed Thrushes and a  
Pileolated Warbler.

Spent much of the afternoon trying  
to capture Thrushes.

Harley set his traps on the  
hill again tonight while I set  
a dozen or so in the ravine  
of the barn for a few more  
D. minimus.

May 14-1941

Harley has had 3 peromyscus.  
That looks like crinitus and a single  
Peroglyptus in my traps had  
3 D. minimus.

After getting up the five specimens  
we packed up and left the  
search about 2 p.m. bound  
for Phoenix and a new gas tank.

On our drive through a scattering  
growth of quink cactus an Elf  
and we were perched on the  
edge of a wood-pine-hickory  
stopped and watched the little  
fellow a few minutes. Its action



May 19-1941

was very much like a hummingbird. It would bob up and down and twist its head around with extreme rapidity. The ill and did not seem shy and much less effort with to fly or tuck into the hole out of sight so we drove on leaving it as we had first found it.

Farther along on Mamm Flats I flushed from its nest that was situated in the trunk of a giant cactus. Near the C.C. camp a loose of yellow shrike (4) were seen on the way and along the route a cactus wren's nest with 3 eggs and several rock wren immatures.

The day I had for the gasoline feed worked very well but had to be filled after.

Arrived at Victor's long and spent a pleasant half hour chatting with Mrs. Willbanks.

Camped for the night about 30 miles west of Williamsburg. Caught a trout that came hopping into our tent.

131

Hardy collected insects up the beach  
and in the mangroves. As he was setting  
his line of traps he caught a small  
gila monster.

May 15-1941

On into Phoenix this morning  
and was lucky enough to find  
a Ford factory representative in town.  
The family was removed from the trailer  
and found to be in a poor condition  
to begin so a new one was ordered  
from Long Beach on a total replacement  
basis.

We drove out onto the desert  
and made camp in a dry wash  
5 miles west of Maricopa.  
A mockingbird with 5 young  
in it was in the tree under which we  
camped. The old birds wanted  
no prisoners voluntarily.

F Sit out all of our traps this  
evening. They were placed down  
across the stubble near land that  
was fairly stony.  
Temperature on the 100° mark at  
the afternoon.

May 16-1941

My line held 1 chipmunk  
1 chipmunk and 1 prognathus amplexus

May 16, 1991

Harley's held 4 *Paroquetina*  
1 *Amphispiza* and 1 young *Protonotaria*  
Not very good catches considering  
the number of traps set.

An I prepared my specimens for  
Machos & I got pretty well acquainted  
they seemed to know me but I am afraid  
of me but this did not keep them  
from scolding each time they came  
near.

An interesting event occurred this  
morning. The female came in with  
several large caterpillars in her  
beak and when she stopped near  
the male to offer him "chickadee"  
scolded at me. One of the caterpillars  
fell out. She evidently felt it  
slimy and turned her head and  
fell to the ground. She immediately  
picked them up in her beak and  
the chickadee descended to the  
ground and returned the look  
over and returned to the nest  
with it. This surely was an  
example of memory on her  
part. I must have mistook

15,

May 16-1941

Two released white-sh. falcons  
young after she had dropped the food.

October 6 - December 1, 1941

Huey with Max Miller (writer) and Frank Gander

Cape San Lucas, etc, also Santo Domingo,  
Baja California, Mexico

October 6, 1941

After considerable delay due to a leaky gasoline tank the trip to Cape San Lucas got underway about 1:30 p.m.

The party was composed of Max Miller, Frank Gander and the writer. We arrived at the international boundary at 2 p.m. 1 hour before the Mexican immigration office opened so had an hour to wait. After this procedure was over we had to get our guns passed by the military comandante which was completed at 4:30. By this time it looked as if we would be delayed until the morrow but by some chance the customs were quickly passed and we were on our way by 5 p.m.

We drove to Ensenada where we had dinner and then on to the end of the graded road a few miles north of Santo Tomas. The exact campsite was made near the old La Grulla Gun Club house.

October 7

Off to an early start but soon found rough choppy roads that made travel extremely slow. About noon, a few miles south of San Vicente, we found two young wild cats on top of a telephone pole. Several pictures were taken of them and finally Gander shook them off.

Arrived at Hamilton Ranch about 5 p.m. where we had dinner and spent the night setting our cots under a large bougainvillea.

October 8

Left about 6 p.m. and stopped at 7 to prepare our breakfast while listening to the news broadcast. The roads were very rough and travel was slow. I have never seen this section of the road so badly cut up and so dusty. Had lunch on the mesa above El Rosario and spent the night about 12 miles north of San Fernando. This heavy driving has tired me almost to exhaustion.

October 9

Made an early start this morning and reached the Onyx about 10 a.m. Mr. and Mrs. Kenneth Brown were home and we enjoyed their gracious hospitality and pleasant luncheon. Visited the Onyx quarry.

One single drum of gasoline had been delivered as agreed. We left about 5 p.m. and had to stop a few miles away to refill the fuel tank.

Made camp for the night about 5 miles south of Marmol.

October 10, 1941

Broke camp and got under way at 7 this morning. A rather late start as I had some minor repairs to make on the truck. Roads extremely rough. I get but little chance to observe the country as my entire attention is given to the operation of the car. Arrived at Punta Prieta at sundown and found our 2 drums of gasoline in charge of "Angila".

Spent the night on mesa about the village.

October 11

Put 40 gallons of gasoline in the tanks. There was still enough fuel left to have gone almost to San Ignacio or about 600 miles of range for the car.

Found the road rough but better in spots than any so far encountered. We arrived at San Borjas Mission about 2 p.m. finding a "Fiesta" in full swing with about 250 people assembled in this remote spot. The sky was heavily clouded over and looked like it would possibly rain. Explored the mission and saw a Canyon wren hunting in the darkened interior near the altar. This mission is of stone and in a rather bad stage of collapse.

Saw a caracara and numbers of Turkey vultures about. Several ravens, many Valley quail, a few Gambel sparrows, 3 cowbirds (2 males, 1 female), several House finches, lots of Cactus wrens, many English sparrows, Rock wrens, San Lucas thrashers, Black t. gnatcatchers, 1 Canyon hawk, pair of Harris hawks.

Made camp on cactus covered flat about  $\frac{1}{4}$  mile west of mission. Heard poorwills at sunset.

Frank set line of mouse traps near camp, ran over level cactus covered ground up rocky slope on hillside. The general vegetation is cactus, mainly some pentahaya (?) and some yuccas while the slopes are covered with copals and cirios.

Looked at traps by lamp light.

October 12

Traps held good catch which includes that taken from them last night: 2 species *Dipodomys* (*agilis* and *merriami*), *Peromyscus eremicus*, *Perognathus spinatus* and *Perognathus baileyi*. Frank saw cardinals down the mesquite wash.

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Traps set again over cactus covered ground.

Frank found some apparently large Dipo. workings about 2 miles west and set a dozen Schuylers in the colony.

Fiesta members sang and played their orchestra all night long.

Looked the line over by lamp light. Heard Screech owls in two directions last night.

October 13, 1941

Frank's traps empty. My mouse trap line held good catch of some species before mentioned.

The natives seem to know of gophers and say there are some in the gardens nearby. I looked but saw no fresh sign though a number of areas looked like gophers had thrown up mounds in older fields.

The revelers started thinning out today. Two truckloads leaving. Frank set line of traps over dried ground and through creek bed this evening.

Miller has been having a good time with the fiesta and made many friends.

October 14

Traps held good catch - Dipo. agilis, Perogn. spinatus and Perog. baileyi and Peromyscus e. eva.

Frank brought in a male cardinal today. Boys from mission were given 8 gopher traps and about sundown a small lad brought in a nice adult female Thomomys. However, the best appearing place for gophers is the San Ignacito Rancho 5 miles west of the mission. This place looks like a great locality for collecting and will try it some day. A wide ( $\frac{1}{2}$  mile) expanse of valley bottom with great mesquites lining the creek bed give ample promise of good hunting.

The ground about the mission is mainly slopes and cactus. The canyon forks at the mission site and permanent water rises to the surface in both branches. Not a lot but enough to irrigate 6 or 8 acres.

Several dates palms, a dozen or so fern palms. Grapes, pomgranates, olives and figs were seen in these cultivated areas. Four or five adobe homes are scattered along the banks above the gardens.

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(Entries for October 15 through November 9 missing)

November 10, 1941

Left La Paz bound northward in mid-afternoon. Miller leaves for San Diego by boat tonight. Reached summit of narrow neck between Gulf and Pacific in about 2 hours.

Made camp at Arroyo Seco within earshot of the rolling waves of the Pacific. This location is almost directly west of La Paz.

Gander set line of traps through cactus. Did not look very good. Trouble with lantern.

November 11

Trap line held 1 *Perognathus*. This This region is extremely dry and much more sparsely vegetated when compared with the gulf side only 40 miles distant.

Gander hunted birds, reported cardinals, jays, Gila woodpecker, mockingbirds, B.T. gnatcatcher, Bewick wrens. Brought in one B. wren and went down with bad stomach. We killed large rattlesnake in bush.

I hunted until about 9:30 Pacific time, saw several Ash-throated flycatchers, Cactus woodpeckers, Cactus wrens, 2 Brewer towhees, 1 Green-tailed towhee, 2 Western flycatchers, 1 Gilded flicker and 1 cardinal which I collected. I was especially anxious to get some more Bewick wrens but did not see or hear one. Too late in day. The birds - like the natives - siesta in the warmer parts of the day. Wisely too!

Packed up and left about 10. Saw Horned larks near the ocean. The road paralleled the sea for many miles and while chunky was in fair condition. Crossed several heavily brushed washes that looked like good collecting localities.

Near Breca Arroyo I shot a shrike and when trying to start the car found a battery cable broken. Took 1½ hours to repair.

Made camp for the night 9 miles south of Refugio near the junction of the Magdalena Bay road.

Both set traps. Broken lantern certainly upsets work as I could have made a few skins after dark. Looked at traps about 8:30 found 1 D. merriami, 3 Perog. *Citellus*, etc.



After the fog passed out towards the coast the sun came blazing down. Hot day in Lower California.

Gander brought in four birds from about camp. Birds very scarce here.

Packed up and left about 1 p.m. At El Refugio we got onto the wrong road and drove 6 miles towards Magdalena Bay before realizing it.

Made camp for the night at an oasis called Buena Vista. A family or two and a cluster of 3 or 4 houses about. A single mule completed the settlement. A few date trees and a few bushes were within a heavy brush fence and kept alive by the waste water from the well. A pair of killdeer on the flat near houses. The whole area is terribly dry, the cactus shriveled badly. Set all traps over cactus covered ground. Looked at them about 8 p.m. One *D. merriami* in each line. Prospects seem poor.

November 15, 1941

My traps held 1 mouse, *Dipos.* Gander's 3 *Dipos.* and 1 *Perogn.*

Large flocks of Lark buntings nearby this a.m. Gander went hunting near camp. Brought in 1 shrike, 1 Cactus wren, 2 B.t. sparrows and 1 *Ammospermophilus*. Birds not common. After getting my skins packed up and left.

Made camp for night at Santo Domingo, found comfortable spot in rotten verdant arroyo. Mesquites of large size well leafed were abundant and stood in bold contrast to the exceedingly dry mesa land. All about over the floor of the arroyo green weeds were everywhere due to flooded conditions of the drainage bottoms. This was caused by heavy rains in the distant mountains during last September though no rain fell over this area.

Mammal sign was abundant and we set our traps on either side of the wash - I chose dry section with scattered creosote bushes while Gander stayed in the more verdant sandy river region.

Looked at them by flash light. Two *Dipos.*, 1 *Perognathus arenarius*.

November 16

Dawn broke with heavy fog. Traps held 8 *Dipos. merriami*, 5 *P.* 2 *Perogn. fallax*?? These latter were in Gander's line along the river association. Birds common. Gander hunted, brought in 5 quail taken with one 410 shot and 2 cardinals. Heard

Horned and Screech owls during the night.

Two caracaras are hanging about. Many Costa hummers about. Few large ones may be Annas but collecting only will prove the point.

Had several native visitors and passed the fact that gophers were wanted.

Gander set both lines tonight. Certainly bad with no lantern, lose about 2 good evening hours each day. Looked at line about 8 p.m., held 3 *Perogn. arenarius*.

November 17, 1941

Traps held 2 *Dipo. agilis* this a.m. Glad to find them here, and 18 *Perogn. arenarius*. . Gander went hunting, brought in 2 Bewick wrens, 2 female cardinals, 1 Lutescent warbler. Green-tailed towhees abundant. Gila flicker, Cactus woodpeckers fairly common. Cactus wrens, House wrens, Brown towhees, buzzards, caracaras about.

Native killed huge rattlesnake near camp and brought in 2 gophers during the day for which I gave 50¢ each.

I set flash trap near camp this evening as wildcat tracks are common in the wooded arroyo.

Gander set both lines again this evening. We looked at them about 8:30 and found 6 traps from one line had been stolen by natives. 3 *Perogn.* taken at that time.

November 18

Traps held 2 *Perogn. arenarius*, 2 *D. merriami* and 3 *D. agilis*, only 1 adult in the latter. Trap camera unsprung. Several Schuylers set at woodrat nests were empty.

Gander hunted bringing in 5 Bewick wrens, 1 B.t. gnat-catcher, 1 Brown towhee, The gophers commenced coming in this morning and by evening 12 had been brought in by the natives, 50 centavos each, certainly the easiest way to get a series quickly.

Frank set both lines of traps again this evening.

November 19, 1941

Traps held 4 5-toed Dipos., 8 Perognathus arenarius. Thermometer read 38° at sunrise. More specimens by natives started in after breakfast. One fellow brought in a nice cottontail rabbit and a Burrowing owl, and two others brought gophers which I didn't purchase. Another brought in 1 coot and an Ammospermophilus neither of which were purchased.

In mid-afternoon two horesemen came in with a badger in a sack. Wanted 3 pesos, got 2. Frank spent rest of afternoon skinning it.

He tried to set a line of mouse traps this evening but boys were watching and had to give it up. Set 5 Schuylers near camp.

November 20

Traps held 1 Perogn. arenarius. Had plenty from yesterday to last all day. Gander scouted up the arroyo and brought in a few birds. Found excellent place to set traps this evening. Far away from all thieving boys.

Natives keep bringing in odd specimens. Boy brought in Brewer blackbird for which I gave him 10 centavos. Not enough to pay for the 410 shell he had used.

About noon a fellow brought in a two-footed lizard for which he received 2 pesos, a price that had been fixed by some other visiting naturalists a year or so previous whom I couldn't figure out but were evidently herpetologists.

Gander set all large mouse traps this evening.

November 21

Traps held 3 D. agilis, 2 merriami and 10 P. arenarius G's steel traps held 1 spotted skunk.

After getting up my specimens we packed up and left for San Jorge 25 miles north.

The area through which we traveled was fairly level and very sandy covered with cactus and leafless shrubs. Very arid. Filled canteen at El Poso then turned westward 3½ mi to San Jorge.

This proved to be a single ramado and a half dozen canoes and row boats on the edge of a rather pretty mangrove bordered estero. The surf could be heard pounding not far

away. Pelicans and Elegant terns were fishing in the sunset light. Cold bleak wind was blowing and not even a bush for shelter made the place rather uninviting. We each set our trap line near camp. Devil cactus scattered all about.

November 22 1941

G's traps held 3 *D. merriami*, mine 6 *Perogn. arenarius* (topotypes), 4 *D. merriami*. Coyotes absconded with 3 traps from our lines. Hunted nearby in the mangroves, found few (3) Marsh sparrows, getting 1. Jays, Green-tailed towhees, Marsh wrens, Least vireo, Lutescent warblers and heard Mangrove warblers. Ospreys (many) and 2 Bonaparte gulls fishing in estero. 2 caracaras about camp.

Set trap camera nearby this evening. Each set our traps nearby camp. This was necessary as coyotes are bad here and would steal traps as fast as mice were caught.

November 23

Traps held short catch, 10 *Perogn. arenarius*, 4 *D. merriami* and 1 *D. agilis*. Camera was sprung during night. Coyote had first robbed fisherman's camp of piece of dried fish, tearing up a sail to get to it. This tidbit he dropped when he found the fresh meat about the camera. Then when the flash fired he left everything. The owner of the sail spent all day mending the tears speaking sharply about all thieving coyotes!

Hunted most of morning but sharp north wind was blowing and hunting was poor. Frank had good luck in gopher traps and brought in 5 large males. He also saw 2 bobcats, one caught a poorwill that he had crippled. He set line of traps near camp this evening. I rebaited the trap camera. Spent the evening with the 3 fishermen, played radio for them much to their enjoyment. Frank rebaited his steel sets.

November 24

Steel sets held female coyote that had died in trap. Probably had chewed some poisonous shrubs. Mouse traps held 2 *P. arenarius*, 4 *Dipo. merriami*. One of Frank's steel sets had caught a rabbit but had been robbed by coyotes.

Day overcast with threatening rain.

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Gander and I hunted for rabbits most of afternoon. About sundown I was invited by one of the fishermen to go with him across the estero in his canoe after oysters. I accepted and the evening repast was well worth the time I spent. Gander set short line of traps about camp and was lucky enough to get a killing shot at a bush rabbit. He also set a  $\frac{1}{2}$  dozen Schuylers through the cactus for woodrats.

November 25, 1941

Traps about camp held 2 Bob-tailed Perogn., & woodrat traps 2 woodrats and another rabbit.

Packed up and left about noon bound for Comondu.

Near La Posa a Horned owl flushed from a mesquite as we passed and I was lucky enough to get a killing shot. Arrived at Comondu about sundown. Filled water tank and retraced our tracks a couple of miles below the villages where camp was established in the narrow rock-bound canyon. Gander set a short line of mouse traps and a dozen Schuylers near a rock wall.

November 26

Schuylers held 2 woodrats, mouse traps 2 imm. Perog. baileyi. Birds common in mesquite along arroyo nearby. Mockers, linnets, Phainopeplas, quail, cardinals, Lark sparrows, Gambel sparrows, verdin, ravens etc. Frank set mouse and rat traps. Traps set through cactus rocky ground and along stone wall. Ground squirrels common. Set camera trap this evening.

November 27

Traps held 3 Neotoma, 2 Perogn. spinatus. During day several squirrels were taken, both by shooting and traps.

This walled canyon is of the usual type. It runs east to west and has the more verdant north slope where many of the cacti and other large shrubs are growing densely tho without leaves at this time. The north side or south slope is much more arid. A fine stand of giant cactus is growing on the slopes, soil conditions permitting. Contrasted to the opposite side where Sweet Patheya is the common cactus.

Frank again set traps, this time through the more sandy soil of the valley floor hoping for Perogn. baileyi. He also made 3 steel sets along creek bed where signs of fox and skunk (spotted) had been found.

and Bassarisk

~~November 28~~

November 28, 1941

Traps held 10 Perogn. spinatus in valley floor sets, a source of hopes. However, 3 baileyi were taken near rock wall instead of Neotoma. steel traps held 1 gray fox. Gander brought in 3 good birds, Hermit thrush, chat and Black Phoebe. Xantus hummers are about though not numerous. Gander saw immature Gambel sparrow with new band on leg.

He set 2 steel sets in arroyo this evening and a dozen Schuylers for Neotoma. I set my flash trap in arroyo.

November 29

Steel sets held 2 foxes, both males. Schuylers had caught 1 woodrat but robbed by fox, also held 1 Perogn. spinatus. After getting up specimens we packed and left at noon, delayed some time in Comondu getting few needed supplies. Roads much better than on our down journey. Many miles were single track with no possible passing. Rock strewn mesas where rocks from road truck had made great piles on either side almost like rock fences. Reached Caripole (??) at sundown, spent the night. Set 2 lines of mouse traps through scattered brush, level ground, slightly rocky.

November 30

Traps held 1 Perogn. spinatus and 10 Dipo. merriami. Packed and left bound for north end of Concepcion Bay where we pitched camp in grove of huge giant cacti. Lots of mammal sign and many tracks of huge rattlesnakes. Gulf shore  $\frac{1}{2}$  mile away. Estero within 100 yards of camp. Ground silty with occasional salty spot. Some frutea, mesquite, bombay and much cholla. Set 2 lines of traps this evening. G. set 3 steel sets and a number of Schuylers for woodrats in cholla. Pair of osprey repairing nest nearby.

December 1

Traps held good catch - 9 D. merriami, 1 Perogn. spinatus, 3 Perogn. baileyi, 2 woodrats and steel sets 1 fox. Birds not common. I had my trap camera set but no luck.

Day bright and clear, moderate temp.

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Bard, California

January 16 - May 4, 1944

June 30 - July 2, 1944

July 16, 1944

June 2 - June 5, 1945

January 16, 1944 Sunday

Rode into ranch at Bard at sundown. Thousands of Mourning doves and 3 White-winged doves feeding in wasted maize on fields.

Near Bard we had seen a Harris hawk perched in dead tree near old pond by levee. Wind freshened during night. Heard Screech owl in tamarask trees above my bed several times during night. Horned owls in distance. Coyotes seemed abundant.

January 17

Wind of hurricane strength. Doves in field could be approached to within few feet before they would leave shelter of clod or bush. No hunting.

Jan 18

Storm still rages. Tried to find few birds but nothing about place that was needed. Saw lots of large egrets and thousands of California and Ringed-billed gulls.

January 19

Went hunting on other side of All American Canal, walked up wash a couple of miles. Few Gambel sparrows but no chipmunks which was the desired species I sought.

In a small back pond a number of coots and about a dozen Spoonbilled ducks were found.

Hunted about the place until sundown. Saw a fine fall plumaged male Blue-winged teal fly in. It was close enough to observe the white crescent on its cheek. Also a beautiful adult Florida gallinule was seen skulking along the edge of the tules across a deep arm of the pond.

Dropped a Green-winged teal but it fell in the All American Canal and was swept downstream before I could reach it.

Jan 20

Saw numbers of egrets, counted 38 and more were about feeding in a newly irrigated field. 17 W.F. Glossy ibises were in another nearby duck and hundreds of Calif. and Ringed b. gulls. The farmers do not like the gulls as they

claim the gulls trample down the young flax in the nearby irrigated fields.

Hunted over the fields near camp and found best collecting in Portman date garden. 2 Western robins were seen and few Audubon warblers. Birds seem to like to eat the dried dates. Few Gambel sparrows. Quail much reduced in numbers. Over-hunted and possibly trapped. Last Nov. I destroyed 2 traps when at ranch.

January 21, 1944

Counted 79 egrets on dried maize field about noon.

Bard

April 26, 1944

on  
50 Tree swallows wires.

Lake near Bard - 3 bitterns looming in tules, 2 Least bitterns flying over water

2 colonies - Yellow-headed BB. about 30 pairs.

Ruddy ducks 2 prs., coots, many, 2 Far. cormorants.

Tex. nighthawk. Yellow throats ?? saw across lake, no shot.

Before sunrise Mourning doves were cooing everywhere. Many Texan nighthawks flying about. Shortly after sunrise White-winged doves started. "Look out, Huey" from date grove in Davis' place.

Cactus wrens started singing just before sunrise as did 3 pairs of Kingbirds (western), one pair in eucalyptus tree near north boundary, one in cottonwood near old house site and one in the cottonwood in center of fence.

Gila feeding young - nest in willow shrub 8 ft above ground.

From drainage ditch on south side 2 B.C. nighthawks and 1 Green heron. Many pairs Sonoran redwings.

Investigated pond south of Bard - enroute nearby saw about 40 Tree swallows, shot 3. In tules about pond 20 pairs of Yellow-headed blackbirds were nesting. They seem to ...(ink smear covers part of sentence) pond water under their nests as there are plenty of tule patches in the drainage canal.

Watched linnets eating flax near Bard. Good thing they are not an abundant species here as they would do great damage.

Flushed a Texan nighthawk on railroad dyke. Acted broody but could find no nest.

Sonoran redwings in scattered lots, not over 6-8 birds, all through the tules. Do not seem to be nesting in the huge colonies of 1916.

Pair of roadrunners kept coming into tamarisk trees while I was skinning birds at ranch. Evidently searching for nest site. One seen carrying small stick which it later dropped.

Screech owl started calling soon after dark this evening (saw 1 Barn swallow  $\frac{1}{2}$  m N. Winterhaven.

April 27 1944

Saw kingbird carrying cotton to half built nest in cottonwood tree. Male Bullock oriole pulling fibre shreds from date palm and carrying to nest in cottonwood in middle of farm.

Drove over to old Experimental Station (Markey Farm). Found Say phoebe nest with 4 young ready to fly. The nest was on a shelf in the old laboratory section. Must have a photo dark room as there were no windows where they could nest. This fact was true at Buena Vista Lake long ago.

Saw 2 cormorants, 3 Spotted sandpipers along the shore. 3 bitterns were looming in the tules at three different and widely separated points. Saw 2 Least bitterns.

Lake near Bard. Saw Pileolated warbler and L.T. chat, heard other chats singing in willows. 1 pair of Harris hawks seen flying about. This species seems more abundant as a second pair were seen 2 miles west on Indian Reservation.

Seepage is bad in this sector and many tule patches are growing in low parts of the fields, possibly the reason for the Harris hawks.

Several pairs of Ruddy ducks. Shot a Pied-billed grebe, male in breeding condition. Drove down to old rim channels on highway 1 mi west of Winterhaven. 6 Snowy egrets very shy were seen. A dozen Western sandpipers, shot 1.

April 28

Day cool, clear and calm. Drove over to the All American Canal and thence to the seepage lakes about 1 mi N.W. ranch.

Many Vaux swifts and Rough-winged swallows flying over canal, collected one of each. Rough-wing male in breeding condition.

Farther on down the canal near the Picacho bridge many West. warbling vireos. Saw many Pileolated warblers. Heard Long-tailed chat singing where mesquite bordered the now almost stagnant Bard canal. Saw another pair of Harris hawks nearby.

Found a pair of Black phoebes feeding 3 nearly hatched young in large well-built nest under bridge (Picacho road crossing drainage canal). The old birds had been unable to find enough hair to fasten their nest together and had used at least 25% tamarisk leaves. The first use of this tree by any bird to be noted by me. Oddly enough at San Diego there is a maximum of Say phoebes with an abundance of Black while at Bard the opposite is correct.

Found a fair sized colony of Yellow-headed blackbirds that were apparently on location in a tule patch about 3 mi s.w. Bard. About 15 pairs were present in 2½ acres.

Saw a Green heron in irrigation ditch and not far away a rather tame Snowy egret, both near the

Saw few Pileolated warblers as I drove along towards Bard.

April 29, 1944

Saw Harris hawk over ranch early this morning.

At Portman's place shot 1 male W. tanager, saw 3 more feeding on dates that had been skewered on date spires up in tree. Bullock orioles building. Several pairs, 1 in eucalyptus and rest in cottonwood. W. kingbirds building, 1 eucalyptus, 1 in dead cottonwood tree high up.

Drove down old Cocopal Canal road to its end below Bard, saw several Wood peewees, 1 Trail flycatcher, several Ash-throated flycatchers.

Oddly enough have seen not a single Vermilion flycatcher this spring. One female wintered at the ranch.

Down to lake again, heard 4 bittern booming at one time near eastern end of slough. Must be breeding but haven't seen a bird as yet. 2 of them were in exact location from which I heard them on 26th.

Saw a beautiful Florida gallinule chasing a coot - no doubt nesting - and was chasing the coot out of her territory.

Woods full of migratory warblers. Shot a Tolmien and Townsend, saw many Pileolated, also 2 Hammond flycatchers. Shot a male Yellow-throat and saw the female. She was gathering worms for young so couldn't kill her. Have seen several Song sparrows lately, 2 pairs in tules this morning. They seem to be more common than in past years, probably due to fewer cowbirds. I have seen but few of these latter birds on this trip. The great numbers coursing the willow bottoms each morning and evening are not present now. Possibly too early.

Went down to Yellow head colony,  $\frac{1}{2}$  mi s.w. Ross' Corner. found them incubating, took 2 pairs. Must be fully 100 pairs nesting. Flushed 3 immature B.C. Night herons from tules and saw 3 A. egrets nearby. Heard Marsh wrens in tules but didn't see them.

Have looked intensely for a nesting colony of Cliff swallows but none located as yet.

April 30, 1944

At sunrise this morning an adult Cooper hawk alighted on a fence post about 50 ft from me. It was hunting and before I could get my gun was on its way. It must have a nest in the general vicinity.

Stayed in camp all day. Saw tanager, male, in eucalyptus and Crissal thrasher singing belatedly in atroplex bush back of camp. 2 pairs of White-winged doves are about, one in dates across the road and one pair in nearby trees.

Roadrunners having terrible time. I found they had an almost completed nest just overhead in the tamarisk and didn't like my presence.

About 9 o'clock this morning they started building a new nest in the date tree about 100 ft away. They worked very hard until noon carrying a great lot of material which they picked up as close to the new nest as possible. After noon they were away until almost dusk. Saw them several times in mid-afternoon chasing insects in the field.

Found 2 towhees' nests both ready for eggs.

May 1

Out very early this morning, down to Bard Pond. I believe all the booming I thought was bitterns is being made by huge bullfrogs. Found a Crissal thrasher with 1 fresh egg,

the nest was situated about 4 ft above the ground in a screwbean mesquite and visible for 75 ft in almost all directions (very open). Old bird singing volubly. This is the regular second laying as they have early sets too.

Saw the gallinule chasing 2 coots away from a certain clump of tules, must be her territory, no trespassing. Found a mockingbird building her nest nearby, was located 6 ft above the ground in a mesquite tree.

Drove over to the Yellow-head colony  $\frac{1}{2}$  mi s.w. Ross' Corner. Collected 3 specimens. Heard 2 pairs of Clapper rails at the same time in the tules. I watched for a couple of hours hoping for a shot but no luck. Its evident that this species comes in about this season each year as careful winter hunting has never roused one or nor has a cackle been heard.

Drove down to the channel sloughs 1 m w. Winterhaven. 5 Black-necked stilts, 3 Wilsons phalaropes and a pair of Cinnamon teals were seen. Shot a phalarope but couldn't retrieve it in the muddy slough.

1 mi N. Winterhaven I found a shrike's nest with 4 fresh eggs. Nest of sticks, string etc. in mesquite tree by side of road.

3 Harris hawks about camp this afternoon.

Night hawks (Texan) over fields at twilight. Heard Barn owl screech and Screech owls (2) babbling during night.

May 2, 1944

Back to Ross' Pond early this a.m. Saw 4 Carolina rails getting 2 (both females and not breeding upon dissection). Heard 1 pair of Clapper rails in dense tules but couldn't root them out. Saw 2 male Yellow-throats getting 1. (These birds do not look right, possibly new). Yellow-headed black-birds singing voiciferously this morning. They say "Come and take a look, by Gar".

Saw a male Marsh hawk and a lone Red-tail has been seen at several places over the area. Seen the latter again near Bard this a.m.

Back to camp at noon. Day hot with hot n.e. wind.

White-winged doves getting thicker, at least 6 pairs can be heard cooing from camp. 1 pair in trees on ranch and evidently have decided to nest nearby.

Only a single pair of Gilas are in the trees about camp. Another pair have a nest in the big cottonwood in middle of field and came in to date palms to forage sometimes without challenge from the resident pair but most often there is a squabble. They seem to make good use of the fallen dates and are especially fond of those that have fallen in the fronds of the leaves near the trunk of the tree.

Saw 2 male Blue grosbeaks near fig trees working on the green heads of maize.

May 3 1944

Back again to pond after Clapper rails. Wind came up at sunrise and blowing gale. No rails nor were they heard. Shot 1 male Carolina rail (not breeding by dissection). 4 baby shrikes out of nest in mesquite near pond.

Went over to Bard Pond but too windy to hunt. The Crissal thrasher has 2 fresh eggs with bird coming to incubate. Mockingbird nest in mesquite has 1 fresh egg. Both birds about but shy. Saw 1 Tolmien warbler and 2 Pileolated in screw bean mesquite in river bottom. Gallinole (1 bird) still driving off all coots that approach. Other gallinole must be incubating as it is the male with the brilliant red crest that has been seen.

Saw number of Western tanagers along route and a single Yellow-shafted flicker near Bard. The first of this species seen for a long time.

English sparrows seem to be thick, nesting about every occupied farm house where they have stock and chickens. Perhaps Mourning doves are the most common birds in valley.

The violent wind made hunting almost impossible today.

May 4

Packed up and left for home.

June 30, 1944

Left home bound for Bard at 1:30 p.m., found desert terribly hot. 110 in car at El Centro. Arrived at Winterhaven just after sunset. Texan nighthawks abundant.

Near Bard several poorwills flushed from road and night-hawks trilling until I went to sleep - nearly midnight.



July 1, 1944

Up before sunrise this a.m. 78°. Found Mourning dove's nest in fig tree, 1 fresh egg, bird hovering.

Kingbirds and Bullock orioles feeding young in nests situated in cottonwood tree.

At least a dozen quarrelsome Gila woodpeckers in fig tree fighting over half ripened fruit.

Drove down to lake near Bard, enroute saw several pairs of Ground doves. Paired but no young. Many White-winged doves in pairs. This species is especially abundant this year. Mourning doves everywhere.

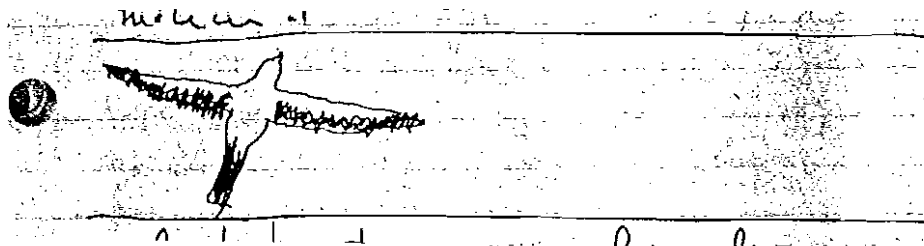
Saw Black-chinned hummingbird, male, at olive tree in Byrd's yard.

At lake heard the three-noted call of Cooper tanager but couldn't get sight of the bird. Was well screened in dense willows.

Yellow-headed and Sonoran redwing, blackbirds feeding young in tules. Watched an Arizona crested flycatcher catch and carry insects to young in a nest located in willow stump (woodpecker hole). Heard cuckoo in several places. Shot at one and while writing notes in mesquites another one came into tree and secured beak full of caterpillars to feed young. Found White-winged dove's nest with 2 heavy incubated eggs. Nest in screwbean mesquite 12 ft above ground. Directly on road saw female incubating. Eggs could be seen through frail structure. Many families of half-grown Desert quail near lake. Saw few cowbirds in river bottom but did not hear single Yellow warbler. This is unusual when I recall the abundance 25 years ago. Florida gallinule and coots had young on lake, also Ruddy ducks. Several Green herons seen. 1 Black-crowned night heron.

Drove on down to lower end of Hautelen Lake. Heard cuckoos in two more thickets. White-wings were common.

Then on towards Winterhaven near old cotton gin site, saw 2 peculiar hawks. They were too high for a shot. Looked at them through glasses. Flight features black fore edge of underwing, white tail rather long and black under neck and under body, white top of head. Back dark, size of a Red-tailed hawk. Soared rather easily and rapidly with but little wing motion.



Looked town over for Inca doves. No luck. Went out Picacho bridge way. At old canal crossing saw pair Blue grosbeaks feeding young in thicket, both male and female were carrying worms. Saw killdeer in shallows near edge of bank. Many Bullock orioles feeding young. Pair of Red-tailed hawks moulting. Primaries (3+4 each wing) flying over All American Canal thence up to Laguna Dam. 8 buzzards were resting on mud bank near water in river, also 1 adult osprey. 10 Farallon coromorants, some were brown immatures on bar near dam.

Day hot as hades - 110 to 115 since 9 a.m.

Back at ranch about 4 p.m. tired and hot. Roadrunners still coo-coo-cooing but no sign of nest. Abert towhees feeding large young on wing.

At sundown a flock of over 150 White-faced glossy ibis flew over at the moment I was near Bard. The birds were flying up river and came from the direction of Pilot Knob.

Shortly after sundown I saw a Screech owl flying about the school house and building at Bard. The day had been terrificably hot and the owl had made an early start. Probably to cool off!

July 2, 1944

Left before daybreak for Picacho mine to search for Spotted bats. Arrived at the mine at daybreak. Searched both levels with gas lantern finding only 3 bats. Considerable droppings were found in 3 places on the first level but no colonies.

Two of the bats were *Myotis longiceus*(?), 1 of which was captured. The other was a medium sized small eared brownish colored animal, possibly *Eptesicus*.

Day a scorcher and I again had a bad heat spell in mid afternoon so left for home. Temperature 108 in shade 3 p.m. Saw 2 pairs of Blue grosbeaks along the drainage canal. And 2 Cliff swallows on Bard Canal, first I've seen this spring.

Saw a migrating Barn swallow southward bound in late afternoon.

July 16, 1944

Over for the day to attend to ranch matters, arrived at sunrise. Found Texan nighthawks flying over fields. Last one observed at 7 a.m.

At Bard. Numbers of cliff swallows were flying over the flax fields, 6 were collected. Part of them were young of the year not long out of the nest.

About the ranch I saw many Bullock orioles with young on the wing and many Gila woodpeckers, all feasting on figs that were commencing to ripen.

Saw Green heron over the main canal near Picacho wash. Left the valley about 11 a.m. saw several Turkey vultures near Winterhaven.

White-winged doves still abundant, in fact almost as numerous as Mourning doves.

Drainage or seepage canals west of Winter<sup>e</sup>haven all dried up.

Bard, June 2, 1945

Came in late last evening, saw a lone Tree duck (June 1) in drainage seepage wets of Winterhaven.

Went hunting this a.m. south of Bard near Hautaline lake. White-winged doves were abundant, found 4 nests 2 eggs each in trees in willow bottom. They seem to be more abundant than Mourning doves.

Found 3 pairs of chats in arrow weed thickets. This species is much rarer than in 1916. Found Crissal thrasher's nest with 3 half hatched eggs.

Migrating birds nearly all gone past, a few late fly-catchers, shot several.

Found a Warbling vireo which upon dissection could hardly have nested for another month. Cuckoos are fairly common, one shot, incubating female.

Saw and heard a few Song sparrows about the lake. Saw several Myarchus magistar. One family of half grown quail flushed in arrow weed, most others are paired and seem to be sitting.

Had fun with a roadrunner. Stood still and clucked like a hen. This the roadrunner didn't like. It approached to about 50 ft and began to circle around me, every time I clucked it would answer and then scratch right and left on the ground with its beak. Twice it went around me then ascended into a tree where it would answer and then whet its beak on a limb. I moved my hand when the roadrunner was looking and it became frightened and ran away.

Red-winged and Yellow-head blackbirds feeding young in tules.

Saw Ruddy ducks on lake and a bunch of about 50 White-faced glossy ibis flying towards the dam. Several Snowy egrets seen flying over and at sunset 2 B.C. Night-Herons flew into irrigating ditch.

A Green heron has young in nest about  $\frac{1}{4}$  mile north of lake and passes over regularly this afternoon between lake and nest, carrying food.

In dusk of evening watched a pair of quail take dust baths within 30 ft of me. Will write up as note for Condor. Female hovered into dust as tho covering eggs, evidently broody. Male scratched sideways like old rooster. Female ran 8-10 ft before shaking dust from feathers which obscured her from view for second.

June 3, 1945

Out hunting early this a.m. Collected 3 male chats, several small birds including another Warbling vireo which upon dissection seemed far from nesting. Day particularly hot 107 about 3 p.m. Large colony of round-tailed ground squirrels about camp. Watched them frolic. They reminded me greatly of the actions of prairie dogs. Set up camera for a try at pictures. No luck, simply popped up out of another hole, never getting into the camera range.

Texan nighthawks fairly common but one shot was far from nesting. Haven't seen or heard a single Yellow warbler nor Vermilion flycatcher. Must have been driven out or exterminated by cowbirds. Even these parasites are not as abundant as in former years. Heard Screech owl in night. One Harris hawk seen this a.m. on willow bottom.

June 4

Early start to Picacho road in Indian Reservation where I hope to find lots of Bullock orioles. Large trees have

been taken out and as a result the oriole population of the valley has been reduced. Also Western kingbirds too have suffered. Found several pairs and collected needed numbers.

Saw a young Meadow lark just out of nest. Caught a young Gila woodpecker, made few pictures of it.

Saw a single flicker first one for trip. Used to be common. Cactus woodpeckers in past years were also abundant, now rare. Seen 1 pair in mesquites about camp.

About sundown went over levee to bathe. Saw Least bittern fly from tules nearby.

June 5, 1945

Into the willow near lake hunting at sunrise. Saw Least bittern in tules but couldn't have returned it had I killed it. Found several pairs of cuckoos but could only get sight of and a shot at one.

Rough-winged swallows flying over lake. Shot two, both young not long out of nest. Saw male Yellow-throat near lake, too close to shoot. Saw 3 pairs of Red-head ducks swimming on lake. Found at least 6 Mourning doves' nests and 3 more White-wings.

Found family of linnets, parents feeding young on wing, shot male.

Few small flycatchers still in willow-arrow weed association mainly Trails and hummers.

After getting up my bird skins I rode up to Laguna Dam with Louis Byrd.

Water in river very low exposing the piles of concrete blocks under spillway. 4 Black-crowned Night-Herons were fishing from vantage points on these blocks. One heron was seen catching fish twice, one was a catfish about 6 inches long which the bird swallowed whole and head first. A smaller perch, which was flatter, was dashed against the rock to kill before it was swallowed.

Several cormorants were seen on a sand bar in the river. The dam keeper spoke of an osprey which used to perch on a derrick near the dam. This bird was maliciously shot by a hunter. Saw a Harris hawk near the ranch on the way back.

Left for home at sundown.

June 11 - June 15, 1945

Huey with Mrs. Ethel B. Higgins, Botanist,  
San Diego Natural History Museum

Palomar Mountain, San Diego Co.

June 11, 1945

Left San Diego bound for Palomar Mt. about 11 a.m. Picked up Mrs. Higgins at her home.

Made camp in Doane Valley about 2:30 p.m.

Saw 3 Saw 3 martins flying near summit at Pine Crest.

Went hunting in late afternoon. V.G. Swallows, W. blue-birds, B. fronted jays fairly common about meadow.

Shot female Yellow warbler in alders. The bird was feeding young on the wing. Found B.H. Grosbeak's nest in Palomar ceanothus over trail female inc. 3 fresh eggs.

Watched male Black-throated Gray warbler gathering worms for young and couldn't shoot it. In evening heard Spotted owl in valley.

June 12

Hunted in lower Doane valley this morning and found B.f. jay's nest with 1 young about ready to leave, evidently other nestmates had left.

Birds were not common. Several pairs of Bullock orioles about but shy. Saw 3 Purple finches, collected male. Hunted the north slope side of Mt. looking for Audubons. Saw several pairs of Warbling vireos high up in the alders but through the spruce and firs there was but little bird life. Watched an Olive-sided flycatcher feeding from tip top of huge fir tree, far out of gun range. The usual lot of B.f. jays and Calif. woodpeckers were about. Found family of bushtits in willows along stream, shot 1 immature. This family probably moved up the stream from zones below. House wrens abundant. All seem to be feeding young.

When crossing the meadow a Western Red-tailed hawk flew over with a gophersnake in its talons. It had a firm grip on the snake with both feet at a point about 6" from the reptile's head. The rest dangled beneath. The sway of the snake seemed to slow the flight of the hawk. I spoke of this latter to John Fleming, custodian of the park and he had seen the hawk in the same locality last Sunday, Jan. 10, with a snake. He couldn't tell exactly the species of the snake but it was not a rattler.

Found several pairs of Black-throated Gray warblers in the deep forest. They flew high into the firs and spruces but was unable to locate nests.

Searched for creepers but did not find them. The only Slender-billed nuthatch seen so far was in oaks near the meadow.

Heard Screech owl in meadow during night.

June 13, 1945

Hunted in the streambed just below Silvercrest summit.

Found a Lutescent warbler's nest when female flushed almost under my foot. The nest was on the ground under a 3 branch poison oak stem in the heavy oak leaves and situated on a rather steep side hole in complete shade. I doubt whether the sun ever struck the spot. The nest held 2 newly hatched young and 2 eggs pipped. The female was extremely tame and very nervous. She immediately seized a small worm and hopped very near, chipping a single sharp alarm note, made some (feigns) in trying to allure me away before I had located the nest which took several steps. When she first jumped in order to avoid treading on the nest. This, to my knowledge, is the first Lutescent breeding record for this Mt. or S.D. Co. I should have shot the bird but didn't have the courage to do so.

Farther west near the road Mrs. Higgins, when picking a flower, jumped a Mt. quail from her nest which held 8 eggs. It was tucked in the deep oak leaves beneath a small fir tree and only about 25 ft from the highway.

Found several singing Cassins vireos but no nests. Possibly they are just getting in.

Tanagers seem to be fairly abundant and pairs are scattered generally through the forests.

Mrs. Higgins picked up part of a shell of a hatched egg. Looks like a Spotted owl. It was lying in a rut of an old wood road.

Shot a Warbling vireo. This female was evidently feeding young as a large brood patch on her belly had been well used.

Stopped at Silvercrest station to talk a while with John Fleming. While there saw an Ash-throated flycatcher gathering nest material from yard. A pair of Calif. Purple finches, evidently the female was off her nest feeding and closely followed by the male. A Slender-billed nuthatch came near several times gathering insects from back crevices. It acted as though it had young as it would fly out of sight into a large oak nearby and soon appear for more insects.



June 14, 1945

Hunted on north side of Doane valley today. Saw Calif. jays but too shy for shot. House wrens thick. 2 pairs of Meadow larks in meadow and many W. bluebirds on copal fence posts.

Found tanager's nest high up on inside limb of canyon live oak.

Set up my camera on grosbeak nest near camp.

During entire day from 11 a.m. on until dark the birds refused to return. This inspite of a blind I had put up when I had found the nest on the 11th.

In evening walked up the road almost to Silvercrest looking for owls with flash light. No luck, didn't even hear one.

Air richly perfumed with bursting azalea flowers. Took down camera after sundown.

June 15

About 10 p.m. last night I looked at grosbeak nest. The bird was not on but at daylight this morning she sat so set up the camera again pulling it back from its 2'6" focus point to 4'. She came in several times during morning at this distance. Wonder if chilling the eggs must have gotten during night has hurt them.

Found Spotted towhee's nest near camp with 4 eggs. Nest on ground in short poison oak. Birds rather tame.

Cassin vireo singin near camp this a.m. Must be arriving rather late.

March 13 - April 22, 1947

Huey with Charles Harbison

Baja California, Mexico:

Barri1, San Francisquito Bay,

Los Angeles Bay

March 13, 1947

Left home about 10:30, picked up Harbie at his home at 11 a.m. reached the international boundary at 12 , recorded my Zeiss lens and guns at the U.S. Customs, then into Mexico.

The Mex. customs officers looked over my permit and after consulting different law books for half hour directed me with a lad from their office to the district military Hdqts. in Tiajuana.

Here I was told to return at 4 p.m.. It was then 1 p.m. so we returned the lad to the Mex. customs house at the boundary, waited at this station until 3:45 p.m., made couple of pictures of the international gate.

Returned to the Mex. military Hdqts. and was received at 4 p.m. by Com. Manuel Espinoza, a very delightful gentleman. He signed my permit and after a few pleasantries we left for Ensenada at 4:30 p.m.

Arrived at Ensenada at 6:10, filled with gas and bought 5 gals. cylinder oil as the car seemed to be using an unusual amount of oil. It was dark when we left Ensenada. At Lagrulla a Barn owl flew across the lights in front of the car. Made camp about 5 mi n.e. San Vicente. The new road was beautifully graded and could be traveled at good speed.

March 14

Left camp at 7 a.m. and was again running on the graded highway about 5 mi south of San Vicente. I saw a Mearns thrasher flying into a thick cholla patch. This is the most northerly record I have ever seen. Graded road ended near San Antonio del Mar.

Over the mesa near San Telmo I stopped the truck and found fresh sign of Dipo. gravipes, noted many Lark buntings in small flocks all along the route. Also all during the day from San Vicente until we camped 5 miles east of El Roasio. All Valley quail were paired off. Near Socorro a large number of Black brant were seen swimming just beyond the breakers. Possibly 5000 would be the number.

Road was extremely rough after the graded part was left so travel was very slow.

Picked up a horned toad near Santa Maria, saw another. Caught a gopher snake at 25 miles north of El Rosario.

Made camp at dark 5 miles east of El Rosario.

March 15, 1947

Up at daylight and left camp about 7 a.m. Rough roads yesterday caused leak in water tank. Am losing all the water so will have to have it mended at the Onyx.

Saw a robin when crossing the river bed near camp at El Rosario. All along the way mated pairs were seen. This is the first time I've ever seen this pairing in this region. Region very dry this year but am told that tremendously heavy rains fell in November, washing out many spots in the region between El Rosario and El Marmol.

During the day again many small flocks of Lark buntings were seen and many flocks of Gambel sparrows were seen.

Saw a Red-tailed hawk sitting on nest in cirio when ascending Aguajito canyon.

Arrived in El Marmol about 4:30 and had to empty the car of its cargo, empty the water from the tank and have it resoldered.

March 16

Morning broke with a sky filled with wind blown clouds. Made a 6:30 start, filled water tank at well 4 miles west of Onyx thence back again to take road south. After few miles we were in a granite area where the cirios were at their best. Found a Red-tailed hawk's nest in cirio along side of the road with old bird sitting. Shot 3 shots with 22 at trunk of cirio near nest but she wouldn't leave. Finally Harbie and I walked over to the tree and gave it a sharp pick - off she went perching on nearby cirio, didn't yell as is often the habit of these birds.

Lark buntings were found in small scattered flocks all along the route. This species seems abundant this year. Roads very rough and bad so had little time to look. Stopped for occasional plant specimens when Harbie saw interesting things. Quail are still in pairs.

Stopped for lunch about 15 miles north of Chapala Dry Lake, saw much fresh gopher work along the dry creek bank. Probably new race of gopher. Day overcast with high clouds but does not seem to be threatening rain. Hope to run beyond it.

At a point about 25 miles north of Punta Prieta the first small flock of quail were seen. This is the first non-breeding bunch to be seen since leaving San Vicente where our

daylight observations began. This region (Punta Prieta) is extremely dry, however, and does not seem to have had any rain at all this season. I was told at El Marmol that 2 heavy storms had occurred during Nov. and Dec. causing considerable washing in the poor road. However, some annual growth was evidently caused by these storms. These storms did not reach below Lake Chapala.

Made camp about  $\frac{1}{4}$  mile north of Punta Prieta on a hill top. The sky cleared of clouds at sunset but by 10 o'clock rain drops began to patter on us and we bundled our beds up, put them in the truck and sat in the seats, just in time as a tremendous deluge commenced.

March 17, 1947

Rain fell in torrents most of the night and we were unable to get out of the car for breakfast until after 9 a.m. Showers fell off and on all day.

Tried to hunt but cold and dark with nothing of interest out. Harbie found an old fallen cactus (cardon) where he collected insects for part of the day - between showers. Looks as though we were stuck for several days. Water tank again leaking. That too is bad.

March 18

Weather clearing a bit with no rain falling during the night so we packed up and left. Found Louis Parra on his way north at the village. He had had a rather muddy time for over 20 miles yesterday. Found few quail in bunches near Punta Prieta. Lark buntings still dominant species. Saw pair of White-winged doves, vanguard of the greater numbers that will follow. Road alignment considerably changed since 1941 but rougher if anything and every chuckhole full of water.

After about 25 miles of up and down hill the Llano del Perdido was reached. The whole region appears to have been through a terrific drought. On the llano hosts of Clay-colored and Gambel sparrows were seen. They were gathered along the small washes where the vegetation was of slightly better condition and more food available. Saw a small deer (female) as it jumped across the road.

In spots all along the route we gathered plants, found several that neither of us had ever seen before.

Arrived at El Arco at sundown and find the road to San Francisquito Bay and Barillos open.

March 19, 1947

Spent the first starlit night comfortably in our sleeping bags. The past two have been spent curled up in the truck seats - a most uncomfortable way to spend a night! Wrote notes home and on our merry way. Water tank leaking and everything.

The course led to Aleman thence eastward through the old diggings for about 3 miles. The rolling hills were replaced by a wide valle through which was growing the most magnificent forest of giant cactus I've ever seen. Miles and miles of these huge giants up to 50 ft tall.

The cirios were beginning to thin and were to be found mainly on west and north exposures.

Running out onto a wide rising mesa I followed the tracks of a truck that had left Aleman yesterday. In fact two cars had left - one a small touring car was bound for Baril, our destination. By mistake I followed the truck. After 6 miles the end of the road was reached at La Union Rancho. This is a pretty place situated in a small well watered valley.

After finding out where to catch the right road I asked about different birds and was told that cardinals are to be found at this station. Saw fresh gopher sign in the wash. Probably a new race of Thomomys.

Getting back on the road to San Francisquito Bay-Baril. This region was of tremendous interest. There were great groves of huge cardons growing in the sandy river bed through which the road ran. Travelers had had a great deal of trouble on this road as there were many places where a cover of brush had been laid in the sand. The farther eastward we ran the more arid the region became. There were numerous patches of northern ocotillo mixed with the peninsula form.

A rock corral called "El Junco" was passed and a few miles farther on a rancho was seen  $\frac{1}{2}$  mile off the road towards the northwest. This place was deserted and called "rancho Lagunitos".

This region looked productive for mammal and some gopher sign was seen. The locality is on the desert slope. Below this place the road ran into a narrow rocky fill of granitic type rocks. A ground squirrel ran across the road and I tried

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stalking it without luck. This too is without question a new race - no doubt of the mid-peninsular species.

Then came a sharply winding hill that was three times as long and as steep and rocky as any hill I've ever tried to drive a car over. This is the "Questa Malo" I was told about in El Arco. From this hill the road ran down a long long desert slope towards some desert hills that bordered the gulf. Annual growth was sparse and becoming dry. Caught a horned lizard about 10 miles east of Barril.

Great thickets of the peninsula ocotillo were seen and the characteristic copals. The elephant tree of the western side was missing. Birds have been extremely sparse but the attention of the driver could not be directed from the road so observations were not widespread.

Arrived at Barril and found a small group of 3 or 4 houses occupied by a single family. Talked to the owner and had a cup of vile coffee which had to be drunk. Made camp 100 yards west of the house near a large broken concrete reservoir.

Went down to the beach for a few moments and made a circuitous walk through the nearby brush scouting for trap line sites.

Each of us ran out about 40 traps apiece this evening. Black pitaya and Schottii cactus, peninsula ocotillo, copal (2 kinds) were the common shrubs on sandy granitic soil. I was told that a terrible dry spell was just ending 6 years with but one or two showers. Cattle had almost all died off so the mammal collecting looked badly.

Looked at our traps about 8:30. No luck. Caught 1 *Dipodomys merriami* by flashlight. Harbie caught insects around camp-light till 10 p.m.

March 20, 1947

Traps held 3 species this a.m. 3 *Dipodomys merriami*, 2 *Peromyscus eremicus* and 4 *Peromyscus maniculatus*. Some sign of *Perognathus* but none taken.

Set up camp. Harbie off after plants. Old man came up to camp with half dozen fresh carrots, 3 beets and a cabbage, later a new species of cactus, much like the "Queen of the Night" found in So. Arizona. This place is certainly an interesting region. The mixture of 3 faunal areas.

Rebaited the traps this evening and at sundown a violent wind that threatened to blow the camp away.

March 21, 1947

Traps held 5 *Dipo. merriami*, 1 woodrat, 1 each of 2 species of *Perogn.* and *Peromyscus*. Beautiful sunrise had us out making sunrise pictures this a.m. Harbie busy with yesterday's plants

Saw 30-35 Lark buntings on level ground near camp. Americ. egret seen on beach yesterday was up dried wash  $\frac{1}{2}$  mile from sea. Red-tailed hawk flying over camp. Buzzards and many ravens about.

In late afternoon I went down to the beach, turned over few rocks and found few shells. 10 Heermanns and 8 Yellow-footed gulls on beach and 3 Elegant terns flying near water's edge. Saw hummingbird (Costa?) catching flies over edge of sea where flies were swarming above rotten sea growth.

Set long line of traps this evening. Harbie set nearer shore line I set inland from camp.

Harbie brought in 2 horned lizards he had found copulating on cow trail near beach. They were belly to belly. The sun was hot to Sonny's back and the sand was hot to Molly's.

March 22

Traps held tremendous catch this a.m. 9 *Dipo. merriami*, 6 *Perogn. arenarius*, 4 *Perog. baileyi*, 2 *Neotomas*, 10 *Peromyscus maniculatus*, 3 *Peromyscus eremicus*, 34 species, not all were saved.

Skinned all day. Harbie off to well wooded canyon 1 mi south camp. Reported many beautiful plants, blue morning-glory, Pala Blanco trees abundant and other cape forms. Found occupied osprey's nest on top of 16 ft cordon. Saw kingfisher (Belted), Green heron, female cardinal, 3 jays, Ash-throated flycatchers, Violet-green swallows over camp. 50-60 Lark buntings around camp.

Five cowboys came into camp again this evening watched me skin kangaroo rats with much pleasure, brought 5 sets of rattles from snakes they had killed near rocky hills north and west of camp (4-5 miles). Said that rattlers are more abundant when days and nights are warmer. So far neither Harbie nor I have seen one.

Harbie set 50 traps and 4 Schuylers.



March 23, 1947

Traps held 2 *D. merriami*, 1 *Neotoma*, 4 *Peromyscus eremicus*, 7 *Peromyscus maniculatus*, 11 *Perognathus arenarius* and 1 *P. baileyi*.

Harbie took 38 this a.m. to bring in birds. No luck. Shot at a shrike and 2 jays.

Been losing too many traps so we decided to tie them. Harbie set 30 tied traps and 6 Schuylers.

March 24

Traps held 1 *Ammospermophilus*, 1 *Perognathus baileyi*, 4 *Perog. arenarius*, 1 *Perognathus spinatus* (probably new subsp.), 4 *Dipo. merriami*, 3 *Peromyscus maniculatus*. On our way back to camp one of the Mexican boys brought out a can in which a woodrat had been trapped. I reached in and grabbed him much to their amusement.

Rebaited traps in evening.

March 25

Large migration of white-winged doves passed by just after sunrise, must have been several thousand.

Traps held poor catch so picked them up. Harbie hunted birds for me today. Many Lark buntings still about and several flocks passed by stopping to feed on cleared area near camp.

In afternoon I shot a White-crowned sparrow (Mar 24). Harbie had nice collection of birds, 1 gnatcatcher and 3 woodpeckers (*scalaris*) were breeding birds.

Numerous Violet-green swallows about. Several ravens. Many Turkey vultures that came almost into camp for refuse from skinning board. Costa hummers are abundant. Saw pelicans over gulf.

Traps were set over rocky north slope of nearby canyon this evening.

March 26, 1947

Traps held 2 immature *Neotoma*, 3 *Perognathus spinatus*, 2 *Perognathus formosus* (both probably new to science), 9 *Peromyscus crinitus* (also likely to be new).

Harbie off for canyon called \_\_\_\_\_ which lies about 3 miles south of camp. There is the only place he has found the blue morning glory in flower. This place is extremely interesting botanically. It seems to be the blending point of cape flora with that of Sonora-Colorado desert and some west coast species. This of course has its affect on the bird and mammal fauna, making this section not only one of the most interesting spots but critical areas of the entire peninsula.

Water tank now empty so borrowed soldering iron from Sr. Arturo Valiciencio and mended the thing again. This time for keeps, I hope.

Cowboy brought in a live rattlesnake this evening for which I paid him a peso.

Harbie rebaited traps that had been set over the steep partly rocky edge of the nearby arroyo.

March 27

Traps held poor catch this a.m. 2 woodrats, 1 *Perognathus baileyi*, 6 *Peromyscus crinitus*. Line was picked up. Harbie hunted for me today and brought in 1 jay, 2 mockingbirds and 1 Cactus wren. Saw a caracara flying by this a.m. Shot a Violet-green swallow over camp. Dissection proved it to be a laying female. They must be nesting in cliff faces along the arroyo.

In the evening the cowboy brought in 2 live rattlers.

Harbie set his line over the same general hill side again this evening.

March 28

Catch poor, did not get a very full catch so all traps were brought in as we plan to move camp to Bahia San Francisquito tomorrow.

Saw many Violet-green swallows about camp today.

Spent afternoon packing up.

March 29, 1947

Left Barril about noon, was told by Don Arturo Valevicentio that there was a short cut to San Francisquito Bay near the coast. The turn-off was located and after following it 3 mi found the road led up a very sandy wash and as no cars had been over it for over a year turned back and took the longer route. The road led up a long desert slope flanked by rounded granite hills on either side. About 6 miles up the slope a jay was flushed from her nest in an iron wood tree the branches of which scraped the car side as we passed. The nest was well built of sticks bound with grasses and held 3 slightly incubated eggs. It was located about 5 ft above the ground. I took both nest and eggs.

Finding the plainly marked turn-off we again headed eastward towards the gulf. About 3 miles from this road junction an agilis type kangaroo rat was seen across the road in front of the truck. This was exactly what we sought so it was resolved that should the environs of the bay be poor collecting we would return to this point.

This road too had not been traveled for much more than a year. Cactus (cholla) plants a foot high were growing in the center of the road. A great stand of drying lupines proclaimed a copious rain had fallen early in the winter. The flowers had largely passed and the greater part of the plants were in the shattering seed stage. Must have been gorgeously beautiful a month ago.

This gradual descending road led almost due east and after crossing a small alkaline playa the most beautiful land locked bay came into view from the low sandy pass.

The region did not look like good trapping ground but we both set out our trap lines. Looked at them about 9:30 p.m. and found 1 *D. merriami*. A coyote had removed 2 *Perognathus* as their tails were still in the traps and the traps stretched out straight. Heard Horned owls hooting during the night.

March 30

Traps held poor catch, 5 *D. merriami*, 4 *P. arenarius* and 4 each of *Peromyscus maniculatus* and *crinitus*. So picked them up and plan to go back up the road 6 or 8 miles this afternoon.

Birds were few but species were well represented. Heard quail calling, saw 2 ravens, more buzzards, 1 pair Gila woodpeckers, 1 pair flickers. These 2 species were in the few scattered cardons nearby. Heard Cactus wrens singing

and saw a lone very shy Sparrow hawk. Harbie picked flower specimens and found a rattlesnake in the sand dunes near the bay. I shot and pickled it. Spent a couple of hours scouting about the bay, made a few pictures. Harbie off to the Mt. top east of the place. All in camp by 1 p.m. packed up and left.

On the bay I saw 8 Surf scooters and a dozen R.B. mergansers. A Spotted sandpiper and a lone Greater yellow-legs were flushed from the rocks. Several pelican skeletons were found on the drift piles. Beak looks smaller and shorter than those about San Diego. Saw many cast off shells in drift piles.

Picked up a horned lizard about 1 mi west of the bay.

Made camp 7 miles west of San Francisquito Bay. A rising rocky hill with a huge curving dyke of granite lays just south of the camp. A few medium sized cordons and a great deal of other brush including 2 species of ocotillo, ironwood, creosote, cholla and the ever present black patahya form a fairly heavy chaparral. Kangaroo rat sign is abundant. The area is of coarse granitic sand. We set out all our traps. Have an abundant supply of very fine wood for fuel.

March 31, 1947

At least I have located the 5-toed kangaroo rat. The traps held 5 of *D. agilis* this a.m., 7 *D. merriami* and 1 *Perognathus arenarius*.

Birds too were fairly abundant, a few migrating Gambel sparrows were about but scattered flickers, Gila and Cactus woodpeckers, Cactus wrens, 1 pair of ravens were noted. A pair of Horned owls have their nest in the rocks on the hill side above camp and kept hooting all day long a habit I've never had before.

Rebaited the traps again this evening. After dinner as we were quietly sitting by the table after dark the Horned owl came into camp and was shot from its perch on top of a cardon. It is the smallest Horned owl I've ever seen.

April 1

Traps held a fair catch this a.m. 4 more *D. agilis* and 8 *D. merriami*, 2 *Peromyscus* and 3 *Perognathus*.

Harbie off after plants and insects. This locality seems very unproductive of the latter but the plant life is abundant and hasn't been eaten off by cattle.

Rebaited our traps at sundown. This a.m. Harbie climbed the mountain near camp and found the owl's nest. There was an egg just hatching and the shell of another that had been broken. Did not see the female owl. A roadrunner kept calling from the ridge near camp but I couldn't catch sight of it.

April 2, 1947

Traps held 5 *D. agilis*, 6 *D. merriami* and 1 *P. baileyi*. During the day 1 *Ammospermophilus* was caught. We each moved half of our lines this evening.

I went for a short hunt about camp, picked up few birds and saw many migrants of Amber and Clay colored sparrows. Old female owl hooted all day today.

Harbie found many new and interesting plants, mainly cape forms.

April 3

Traps held poor catch this a.m. only 4 *D. agilis*, 3 *merriami* and 1 *Perog. baileyi*. The moon is nearing full and I blame this very bright night to the light catch.

Went hunting west of camp this a.m. Saw many pairs of paired quail, shot at a towhee, killed 1 Desert sparrow, 1 Gambel sparrow, 1 Black-headed grosbeak (migrant), 1 jay and 1 Gila woodpecker. Saw 2 pairs flickers, several Gila woodpeckers and many pairs of Ash-throated flycatchers. This is the most abundant bird. Mockingbirds are not uncommon. White-winged doves were fairly common crowing from the tops of the cardones.

Baited our lines again this evening. A terrific west wind came up at sundown and a bank of low clouds were visible to the westward.

April 4

Traps held 3 *D. agilis*, 5 *D. merriami*, 1 *Neotoma* and 2 *Peromyscus*. Picked all traps up as we plan to leave in the morning.

Saw a pair of jays with 2 half-grown young ones while picking up my traps. Tried to catch one of the young ones but the cactus thickets were too much for me.

Red-tailed hawk over camp during afternoon. No traps out tonight as we plan to move on tomorrow.

Chased poorwills after sundown but have had no luck with them. They are hard to get into the flash beam and when I do catch them they leave. Have not heard Elf owls since the recent night at the camp.

April 5, 1947

Full moon last night and cold. Thermometer in car was 36° at sunrise. Day calm and we got away about 7:30.

Stopped along the way to gather plants. Found a Cactus wren's nest beside the road with newly hatched young 6 miles from our campsite.

Up the steadily rising slopes through myriad cactus forest then into yucca and as the canyon closed in a mine was seen on a nearby hill side and we investigated for bats. Shaft almost vertical and no ladder. Several rocks revealed water at bottom and over a 100 ft deep. Lots of very pretty turquoise blue specimens about.

Up the "Malo Questa" which was not so bad as I had thought when descending.

Near top of this hill I hunted for ground squirrels. Shot one that fell into a rock pile and could not be seen for recovery. This is certainly a new variety and unaccountably rare being in light granite boulder terrain!

Found a quail's nest with 10 incubated eggs which I left. The nest was made of a few gathered straws placed in a slightly depressed place scratched in the sand by the parent bird. This was neatly tucked in between two parallel rocks that were just wide apart enough for the nest. A bush shaded the crevice, female bird flushed from underfoot. Old male on rocks nearby called and acted nervously while I was about.

Driving on we were now on the Pacific slope.

Stopped for plants and finding some "new to us" - yellow flowering shrub. Noted fresh gopher workings while picking them. Decided to stop and collect at least a short series. This locality was about 1 mile east of Rancho Lagunitas and near some lava hills in the middle of the great yucca covered slope. Birds were abundant - White-winged doves, Cactus wrens, Gilded flickers, Phainopeplas, gnatcatchers, Cactus woodpeckers, Gila - a couple of ravens and the usual buzzards.

Set 4 gopher traps and by sundown had 5 specimens which I put up while perched on collecting chest up in car. At sundown 2 White-winged doves, evidently a pair from their actions, came to roost in a nearby palo verde. I thought at first they had a nest and after frightening them away found it to be a regular roost as a large spot of fecal matter was underneath the limb.

Charlie set 15 mouse traps near camp.

After dark a Perog. arenarius came up to the back of the truck and Harbie caught it with his hand and flashlight.

April 6, 1947

38° at sunrise. Traps held 3 Dip. agilis, 1 D. merriami and 1 Perog. spinatus. Several more gophers were taken this a.m. Broke camp and left about 1:30. Stopped to look over the shacks at Rancho Laquinitas. A huge stone corral was the chief structure. An air sock and large level field marked this spot as an emergency landing field and is probably on new maps. Shortly after leaving this place the cirios became more abundant although a few had been seen when the summit was reached.

About 4 miles on a horned toad was caught running in the wheel track of the road. Drove through the giant cactus forest for miles then turned back into a cross road to Rancho Union where I had seen gopher sign on our way out. Set 8 gopher sets amid cactus in valley floor.

This place is heavily overstocked and is now badly tramped out. 3 weeks ago it looked beautifully verdant. A tremendous growth of chollas was found and the reason for its abundance was seen in the way the cattle fed. When they sought some protected bit of green growth that had sprung up within the shelter of the cactus they would brush the cholla off with their faces to reach the tidbit thus scattering pieces of the cactus plant to sprout new growth.

In the evening Elf owls were heard, not many but at least 3 pairs within earshot. With the flashlight I found one and shot it.

Poorwills also were heard calling from nearby rocky hillside but couldn't get them into the light. Charlie set up a dozen small traps near camp. A nearby resident of the Rancho Union came in to see us and told of cardinals being present.

April 7. 1947

Elf owl so unique I decided to stay another day and try for more. Hunted near camp. Found 2 pairs of cardinals, collected 1 pair. Brown towhees of which I was very surprised when first hearing them as they had a call note that greatly resembled the Spotted towhee of the north. the usual Cactus wrens, Gila, Cactus and flickers were here. Ariz. hooded quails. Heard Barn owl screech in night.

Traps empty this a.m. Harbie off after plants. This evening I heard Elf owls in two directions but though I was out until 10 o'clock I could never get up on them. During night one came into tree in camp but was moving too fast. I pursued the bird clear across the valley but never got into the flash light beam.

Poorwills again calling on rocky side hill. Caught one in light beam but too far for shot. It flew into the air while still in the light but got behind a giant cactus and was off.

April 8

40° at sunrise. Traps held 3 *D. agilis*. Broke camp and left. Arrived at Almalli about 12:30. Bought a gopher for a peso, filled the car water tank with good water for a peso. Over to El Arco where a fellow had a horned toad for which I had to give 2 pesos. Filled the gas tank and left about 3:30. Saw a Harris hawk 10 miles n.w. of Arco. Made camp 1 mile west of Mesquital at dark. Fog covered the hills to south but did not drop to ground level. Cold wind blowing. Heard poorwills calling from nearby mesquite wash.

April 9

Up early this a.m. broke camp and on our way by 6:30. Collected many botanical specimens along the Llano del Perchito. Caught horned toad 10 miles s. Punta Prieta on rocky terrain. Caught up with stage at Punta Prieta and sent 2 hastily written notes, 1 to Fisher, 1 to Mrs. C.

Left Punta Prieta about 3:30 for Los Angeles Bay. Cold brisk wind from west. This region was green and lush, all the cirios had leaves and the brush was fully leaved. This was the most verdant area observed on the whole trip.

Arrived at Los Angeles Bay after dark, made camp  $\frac{1}{2}$  mile north of town.



April 10, 1947

Found Mr. Daggett and got directions from him about the country to south. Found that George Lindsay had been in yesterday. He was a member of a yachting party wandering around the gulf.

Found out that a road ran south for about 15 miles. 12 miles south however was located the old mining town Las Flores. This place was found to be in almost the center of a huge valley that ran up from the gulf. The flora was of extreme interest. A tremendous forest of giant cactus was found starting just beyond the salt water line at the bay. A few mesquites and ironwoods were seen but this type of growth must long have been chopped out to fuel the 3 large boilers at the old mill which must have run in the 80's. A huge clump of tailings gave evidence of several years of operation.

Searching about much mammal sign was found including pocket gophers. Set 10 traps as soon as camp was established. This *Thomomys* seems to like the apricot mallow plants which are growing abundantly.

On the way up I saw a shrike, Violet-green swallows in the cardon near a little rancho 6 miles from L.A. Bay. Gila woodpeckers, Cactus wrens, Gilded flickers, Cactus woodpeckers. Great flocks of Lark buntings, a few White-crowned sparrows, but the road was so sandy that it took almost my entire attention to keep the car going right.

Spread the old tarpaulin over an empty adobe wall and made a shelter in which to work. After lunch walked a few hundred yards west. Saw a pair of thrashers (San Lucas), heard Cactus wrens. The usual raven flying about camp when all humans have left.

Looked at gopher traps and by 4 p.m. had 5 specimens, all with black face and without question a new race! Looked at traps about 9 p.m. *Dipodomys merriami* swarming. Our combined lines were 100 mouse traps. They held 6 *Perognathus arenarius*, 4 *Peromyscus maniculatus* and 20 *D. merriami*,

April 11

The combined total of the catch last night was 35 *D. merriami*, 8 *Perognathus arenarius* and 7 *Peromyscus maniculatus*, an average of 50%, a tremendous catch indicating an over population of rodents. Two more gophers this a.m. Rebaited traps this evening.

April 12, 1947

Catch not as abundant this am. Only 20 merriami, 1 Peromyscus m. and 1 Perog. arenarius, Picked up traps this a.m. Harbie found some large appearing burrows that he thought were large kangaroo rats. Set 6 Schuylers this evening.

April 13

Violent wind came up just before dawn and threatened to raze camp. Kept it up all day long and a more miserable day I've never spent in camp before. Caught few gophers. Harbie's Schuylers held 2 D. merriami. Set more gopher traps.

April 13

Schuylers held more D. merriami so gives there are no large Dipos. here. So started packing up to leave tomorrow. Harbie brought in a gopher he had captured in a Schuyler trap. The beast must have been out in midday.

April 14

Packed up and left this a.m. Saw a shrike near camp. Drove around the south end of Los Angeles Bay but saw nothing worth spending the night for. Had a good refreshing swim in gulf. Made camp for night in south end of Agua Armarga valley. Each set out a line of mouse traps through creosote growing in sandy soil.

April 15

Traps held 5 D. merriami and 5 Perog. arenarius. Some scattered gopher sign. Tried to set but ground too dry. No use trying to catch desert gophers in powdery dry sand or soil.

Dipos looked so different that I decided to try another night for more. Set out all our traps through creosote sandy soil valley floor.

April 16

Traps held 14 D. merriami, 1 Dipo. agilis and 8 Perog. arenarius. The agilis was a surprise. Put up the skins and packed, leaving the place about 2:30. Day terrificly hot, 104° in car.

Tried to find short cut road that intercepted truck line some 30 miles north of Punta Prieta but got twisted up in some off roads that led different ways and by sundown we were in Punta Priets where we spent the night.

April 17, 1947

The plant life here was especially lush so spent a couple of hours getting specimens.

Up the road about 18 miles picked up a horned toad. Gave the road to a XX Mex truck and got stuck. The Mex. was aware of our predicament but drove on. Spent 3 hrs. digging the truck out of the sand and getting onto the road again. No more road courtesy to Mex. trucks.

Camped in granite boulders about 5 miles north of Catavina.

April 18

Off to a 7:30 start this a.m. but made pictures through this interesting region and progress was slow. Found Red-tailed hawk's nest in cirio, young downy but large enough to stand up. About base of cirio coyote feces were seen and evidence of a fallen young hawk where it had been pierced on an agave and eaten by the coyote. The beast made nightly calls in search of tidbits that fall from the nest. I picked up the tail end of a racer that had been partly eaten by the hawks.

Gassed up at El Marmol, picked up horned toad 2 miles east of San Agustin.

Found lots of interesting plants after leaving San Fernando Mission. Camped for night about 15 miles north west of the mission near a newly built rancho called Rancho Arenosa.

We each set a line of traps over rocky agave covered hillsides. A Scott oriole sang his evening song from nearby cirio and two quail, male and female, came to roost in a basked formed cirio top a rod or so from camp. Harbie sick - probably got some plant poison.

April 19, 1947

Traps held 1 *Dipo. agilis*, 6 *Neotoma*, 3 *Perog. fallax* and 3 *Peromyscus eremicus*. Viscerated them and left. Roads extremely rough. Saw many Lark buntings along the route to El Rosario. At the village a Prairie falcon was seen rising from a stoop where it had taken a chance at catching a young chicken.

Along the coast several large flocks of Lark buntings were seen and at Socorro about 2000 Brant were feeding on the green sea lettuce along the ocean shore.

Made camp about 7 miles s.e. San Quintin where traps were set over the cactus and agave covered hill sides on the big terrace. Hope to catch *Perog. baileyi*.

April 20

Traps held 2 *Neotoma*, 1 *Dipo. merriami*, 1 *Perog. fallax*, 2 *Peromyscus* and 18 *Peromyscus eremicus*.

Rebaited traps this evening. Looks like rain tonight.

April 21

Traps held poor catch, 8 *Peromyscus eremicus*, 1 *Neotoma i.* and 3 *Perognathus fallax*. Saved only a few. Packed up and left.

Spent the night at the old camp ground about 6 miles north of Sto. Tomas under a huge live oak tree.

Heavy overcast sky promised rain but the night was dry.

April 22

Up early after Screech owl had kept calling in the nearby oaks most of the night.

Showers fell after breakfast but all the camp had been packed so no damage.

Arrived at International Boundary about noon, passed the customs with but little trouble and home about 2:30.

June 14 - June 24, 1947

Huey and Phillip Lichty

Santa Catarina Landing, Baja California,  
Mexico

incomplete - last part of notes missing.

Santa Catarina Landing Trip - Phillip Lichty, L.M. Huey

June 14, 1947

Left San Diego 9:00 arriving at International Boundary. Declared guns and 1 camera lens in U.S. customs. Expected some delay at Mexican side but was wafted across without stopping the truck. Great!!

Day overcast with high fog and rolled along smoothly over a more improved road than ever before.

Stopped for night at a point 3 miles south of San Telmo about 4 p.m. On stepping out of the truck found near left tire going flat, spent 2 hours getting spare off rack and replacing. A sharp rock had punctured it.

Set 50 mouse traps over some sparsely brushed flat ground. In this spot I had previously noted signs of *D. gravipes* and as it represented the northernmost point of habitat for the species was anxious to get specimens. A short growth of annual plants with only dried stems new shown was present and through this long well beaten *Dipo.* trails could be seen where these animals visited each others burrows. Some trails over 75 ft in length were noted connecting holes. Looked at traps by lantern light 9:30 p.m. 1 *Dipo. gravipes*, 2 *Perog. fallax*, 5 *Peromys. maniculatus*.

June 15

Traps held this a.m. 1 *D. gravipes*, 7 *Perog. fallax* and 6 *Perog. maniculatus*, all that were saved as specimens, dated 6/15.

Packed up and left at 9:30. Soon after starting a gopher snake was caught crossing the dusty road. Near Camelow a black racer was caught. Travel was very slow as the rough dusty roads were difficult driving. Day pleasant and cool.

Near Sta. Maria saw a Red-shafted flicker and when going down canyon 2 mi e. Socorro a Cactus woodpecker was seen acting peculiarly on an agave stem. Stopping to investigate an old nest hole was found in a dead dried agave plant. A black racer stuck his head out of the hole. Evidently the reptile had been the object that had caused the woodpecker's peculiar actions. The snake retracted deep into the hollow stem so we rolled the agave into the creek bed and set it afire. Needless to say the snake came out!

Quail in small flocks were seen along the coastal plain between Socorro and El Rosario. Arrived at El Rosario about dark. Our aneroid showed 900' on the mesa above and 3/9 miles 100' at the village. An American egret was seen flying towards the sea in the failing light.

June 16, 1947

Broke camp at 6:30 this morning. Saw many snake tracks in dusty wheel tracks on valley floor but none were seen after the mouth of Aguanita canyon was reached. Road terrificly rough and travel slow. Agave goldemanni blooming profusely over higher hill tops and cirios were beginning to show flower crests.

Small coveys of quail 8-10 probably family broods seen along the way. Collected plants all along the route. Road badly cut up all along and every flat place was a dusty mass. So travel was slow.

Made camp for night 3 miles west of Onyx=Marmol near their well. About 40 traps were set through the low brush, creosote and malapi ground.

Single bat flew about camp in dusk and during night. Phillip saw it flying in and out and through the open doored truck! Picking up the flies we had brought along with us. We hunted for snakes with flash light for an hour or so last night without results.

June 17

Fog rolled in over the plain just before sunrise and cleared about 6:30. Traps held 6 *Dipo. merriami*, 1 *Dipo. agilis*, 2 *Peromyscus maniculatus* and 2 *Perognathus fallax*.

Pair of Leconte thrashers kept calling from nearby yucca. Black-tailed gnatcatchers and Desert sparrows seen.

After preparing the specimens drove on into El Marmol, called on Kenneth Brown and had a flat tire repaired. Left the Onyx about 2 p.m. and began searching for seeds of penstemon. Found them scattered through sandy washes in area 4 mi s. of Onyx. The seeds were not too well matured but the older stems were selected and will probably be old enough to fill out from moisture in stems. Found rear left spring broken on truck. Drove on down to within 2 miles of Catarina, camped for the night.

Set 40 traps over lightly brushed granitic soil amid huge granite boulders. Shot pipistrellas (bat) over camp in dusk.

June 18, 1947

Heard Horned owl during night. Birds were not common. A pair of White-winged doves nearby kept calling. Flicker seen and pair of Gila woodpeckers noisily calling. 1 Costa hummer, several pairs Ash-throated flycatchers and single Violet-green swallows.

Prepared specimens and left camp about 2 p.m. planning to stop a mile or so south of El Marmol so that an early start tomorrow can be made on the spring repair.

Set line of traps through rocky sparsely brushed hill side where lots of small agave plants were growing.

June 19

Traps held 1 Neotoma, 5 Perognathus fallax and 4 Peromyscus eremicus.

Into El Marmol for repairs. Left about 2:30 p.m. bound west for the two proposed stops, one in the giant cactus forest near Catarina and the other at the Playa.

Stopped for first camp in broad canyon well filled with large giant cactus and cirios. Vegetation all seemed nice and green though the flowering season was over. A newly established rancho called "Rancho La Ramara", alt. 1150 was nearby. This place is miles n/e Catarina.

Set 40 traps through fairly heavy growth of fruitea, cactus and other shrubs on valley floor. Small animal sign fairly abundant.

After dark Phil and I donned our hunting lights to search for owls. Ran into a family of Horned owls but neither of us made a kill in spite of the fact that we each had a shot. These owls seemed to have a high pitched single call note and perched on the top of the giant cactus. Approach by jack light was not difficult but shot was too light. The dogs at the ranch house set up such a concert of barking that hunting in the neighborhood was well nigh impossible.



June 20, 1947

Birds not uncommon at this station. Gila, flicker, Cactus woodpeckers. Black-tailed gnatcatchers, Desert sparrows and an unseen Mearns thrasher sang beautifully about camp at sunrise. Traps held fair catch, 1 *Dipo. agilis*, 3 *D. merriami*, 1 *Neotoma*, 2 *Perognathus baileyi*, 1 *Peromyscus maniculatus* and 3 *Perog. eremicus*. Phill shot a brush rabbit when on his trap line and another one later. He searched the hillside for a possible chance at the Horned owls but no luck. Found an old mine tunnel and saw 5 bats that, when flushed, flew on into the mine and down a maze where they were beyond capture.

Rebaited traps this evening and as a cold black wind was blowing we did not hunt.

June 21

Traps held short catch, 1 each of *Dipo. agilis*, *Perog. baileyi* and *Peromyscus eremicus*. After putting these three up we took equipment to capture bats and went up to the mine tunnel. Phill made a gadget out of rope, a sack and an old shirt that he hoped would block the maze. He slipped up over the cave and dropped the gadget down. It didn't work but we were lucky enough to capture 3 of the five bats. They proved to be the same species of pollen eating bat that was found in San Diego last fall. They were roosting in the entrance of the tunnel in fairly bright shadow light. Two were captured with the butterfly net and one was shot with the 22 snake gun. One was male and the other two were females, both of the latter were in a state of lactation, two rather large teats, one on either side were located close up under the wing bone and the milk glands were very large, nearly covering the side of the body.

One of the bats we saw flew out of the tunnel into the bright daylight. This bat was later flushed from within a fairly deep shaft when pebbles were cast into it. I watched it ascending for perhaps 50 ft. The shaft was about 5'x8" in solid rock. The bat circled 7 or 8 times to make the climb. The flight seemed heavy and with much effort. As it left the shaft I shot it.

Upon skinning the specimens they were found to be in good fat condition. The presence of yucca and cardon blossoms offered food for the stomachs all were filled with yellow pollen mash. One had 2 winged parasites on it which were preserved. The fact that milk flowed from the mammae offered proof that small young were somewhere in the tunnel tho we failed to find them.

While investigating the mine tunnel I found a black-tailed gnatcatcher's nest with 2 large young. It was situated in a bush about  $4\frac{1}{2}$  feet above the ground in plain view. Shall try to make pictures of it tomorrow if I get my work done in time. Phill ~~reset~~ the trap line this evening. Again at sunset the wind blew bleak and cold with scudding fog banks on the hills towards the west. Saw a lone myotis at dusk but didn't get a shot.

June 22, 1947

Traps held a fine catch this am, 2 kinds of 5-toed Dipos, 3 of one (large) and 4 of other (smaller) 3 *Dipo. merriami semipallatus* and 4 *Perognathus baileyi*. Finished those skins by 1:30 and loaded up the flash equipment and camera and went up to the gnatcatcher's nest.

Upon setting the camera both young jumped out of the nest. We caught them both after considerable scrambling. They were placed in the butterfly net and hung under a perch in hopes of the old birds getting into picture position. After about an hour and a half I found that the old female bird would not alight up on a perch on top of a bush so I changed the camera to a dried yucca leaf down low. The net holding the young was placed direct underneath. This worked well and in a very short time several pictures were made.

Phill ran a trap line over a granite hill that was well clotted with brush. Rebaited the line set on 21st. Cold again this evening.

June 23

Cold this a.m.  $44^{\circ}$  at 5 a.m. Traps held poor catch. Those on the granite hill held 9 *Peromyscus eremicus*. The old line 1 *D. agilis*, 1 *D. merriami* and a juv. *Perognathus*.

Flickers feeding young in nest hole 15 ft up in a cardon. Several families of gnatcatchers seen through the brush. All traps picked up today and reset on the flat frutea salt bush valley floor and a short line on granite boulder hill-side south slope. Saw a lone male purple martin in late afternoon.

Set up an agave blossom in can of water and braced with ropes, hoping a hummingbird would feed in camp. Didn't have long to wait. Set camera on flower and had many chances on fine pictures.

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June 24, 1947

Traps held good catch, 7 Dipo. and 1 Perogn. were caught on cactus brush valley floor while 4 Perognathus spinatus and 9 Peromyscus eremicus were taken on the granite slope of the hill.

While preparing skins pictures were taken of the Costa hummer. It became so tame that it alighted on the handle of a spoon Phil had filled with syrup.

Packed up and left for the Playa Santa Catarina Landing. The road led down Arroyo Grande = Canyon Grande? - where an immense forest of cardones are growing, passing through the quaint little village of Santa Catarina. The hills on the north faces were heavily clothed with Terote-elephanthus. Some were blooming pink with blossoms but still much too early for good flowers. After the terote were passed the brush became stunted. This was due to the closer approach to the sea.

Arrived at the landing about 6 p.m. and set out 2 lines of traps through fruitea in an arroyo bottom. Didn't look too good. Cold bleak wind blowing didn't help morale much.

Kenneth Brown had given me a note to Sr. Martinella who fixed up a comfortable room that had a board floor in it, for our stay.

June 25

Traps poor, held 7 Peromyscus maniculatus, 2 Peromyscus eremicus and 3 Perognathus fallax, one of the latter was badly eaten by other mice. A little dipo sign was seen but not a single specimen taken.

Tide was low about 9 a.m. so spent couple of hours on beach gathering shells.

Three trucks of Marmol came in and were unloaded, some blocks weighed over 4 tons.

Set traps.

June 25 - June 28, 1952

Potholes, Imperial County  
California

Potholes, Imperial Co., California

June 25, 1952

Left San Diego 9:30 a.m. bound for short trip to Bard for summer bird notes. Filled water tank in truck at Laguna Camp. Cool, windy. El Centro warm 90° with violent wind blowing from southwest.

Arrived at Colorado River about 3:30. Saw turkey vulture flying and was first bird for the trip in the Bard region. Near Winterhaven many paired mourning doves flew up from roadside. Single ground dove near Ross' Corner. Many western kingbirds on wire near highway. Many white-winged doves seen singly and in pairs enroute to Potholes. Another turkey vulture seen near upper end of valley.

Approaching the old Laguna Dam head gate a lone osprey was seen flying over the river. It circled and stooped at a fish in the spillway near the head gate but missed. Circled again and alighted on a lamp bracket atop of the head gate within 50 ft of me. On the rock in the water below a single b.c. night heron and a single snowy egret were fishing. Several meadow larks on ferns in cultivated region.

Made camp in willows 1/4 mile above Potholes. Saw 4 male yellow-headed blackbirds, many Sonoran redwings. Heard twice and had fleeting glance at y.b. cuckoo in dense thickets nearby. Male bullock oriole, 3 immature verdins, white-winged doves calling in river bottom, 1 came near and acted as tho it was trying to get to its nest. Gila woodpecker feeding young on the wing. 1 Farallon cormorant flew over. Dwarf cowbirds flying singly over willow bottom.

Just at sundown a young screech owl flew into tree above camp. It proved very tame and within half an hour 5 more joined him. It was apparently an adult pair and their 4 young.

June 26

The 6 screech owls stayed about all night. Many times I awakened and watched them with my flashlight. I had never had so close an acquaintance with the species before. Their feeding habits were very interesting. The parents would catch an insect and all would gather and would pluck a small portion from the parent's beak. I did not see any evidence of the old ones using their talons to tear food nor were they observed catching food with them. It was rather odd to see them feeding on the ground and having the young run to them on the ground like chickens, uttering a low series of cluck-clucking sounds as they ran. The young were like young of other species, always teasing their parents for food and following wherever the parents went. When perched either singly or more on a limb they would sway sideways like barn owls. When caught

by the ray of the flash light they would nod and bob their heads, blink their eyes, turn away from the light but with much curiosity try to turn one eye and the other trying to see what was shining at them. They fed and ran about on the ground much more than one would think they could.

2 Clark nutcrackers, 2 mi north Bard - Ed Hayser.

Left the camp when dawn broke and the trees were turning golden from the rays of the rising sun.

Went hunting east through the old river bottom. Found 2 doves' nests one with 2 eggs and another with two small young, both on stumps about 8 ft above ground. Colony of great-blue herons of about 40 nests in 10 large cottonwood trees. One tree had 6 nests with a total of 16 young, almost large enough to fly. 2 nests held 4 and 4 nests held 2 each. Beneath the tree which was a dead one I examined 3 small bluegills that the birds had vomited as we approached. The appearance of a person under the tree caused considerable excitement and all the young stood up on their nests to peer. Several adults were flying about at safe distances squaking an alarm note as they flew. This added fear to the young though they didn't fall off either nest or limb.

Ariz. crested flycatchers observed catching blow-flies.

Found a pair of nesting Ariz. crested flycatchers, shot the male. Upon dissection one testis was found to be developed (17 mm) and the other underdeveloped (2 mm). Nest was in old woodpecker hole 12 ft up in dead cottonwood stump. Single male Cooper tanager seen twice near camp early in morning and late afternoon visit the bird was seen to capture a large caterpillar and thrash it to death on a limb then carrying it off probably feeding young.

Cuckoos breeding in walk this a.m. I disturbed 4 different pair in the willows, shy as usual. The pair skinned both male and female had brood packs on bellies. Eggs must have been fairly fresh as the patches were not highly thickened as yet.

Shot 2 cuckoos near camp. A small yellow empidonax was shot near camp. Male with undeveloped testes.

Rough-winged swallows abundant. Cowbirds fairly abundant. Female collected held fully developed egg. Blue grosbeak, male breeding, late nesters like those on the coast.

Single wood ibis soaring high in late afternoon.

Ed Hayser came into camp about 7:30 last night, stayed until 10:45, remarked on scarcity of vermilion flycatchers (probably due to cowbird predation).

Screech owls came into camp in early evening and went through usual antics. Lone shrike flew into tree over camp.

June 27, 1952

The family of screech owls left again at breaking dawn after a night of revelry about camp. Again I was much surprised to see how much they fed on the ground and ran around like chickens on the road.

Went hunting again through the willow-arrow weed area but found little of interest. Saw two more pairs of wild Arizona flycatchers, several ash-throated. Another blue heron nest tree with 5 nests and 11 young in them. Several B.C. night herons. Snowy and American egrets. Heard cuckoo in two different places.

One gilded flicker, saw a pair of long-tailed chats but didn't get clear shot. Heard another singing in arrow weed thicket. The single wood ibis flew close overhead, probably same one seen yesterday. A lone immature white ibis flew over and circled not more than 100 feet overhead, so close in fact that I could see his bald eye and had only my little 38 cal shot gun so couldn't kill it. Shot at male Bullock oriole, failed to kill. Cliff swallows are numerous and are nesting under concrete bridges that span the large canal. Many Farallon cormorants flying up and down river.

Two cuckoos about camp today. This species seems to be very common and apparently nesting. Several blue grosbeaks about. Roadrunners not uncommon. Tracks abundant on dusty roads. Gambel quail with half grown young. Some seem to still be paired off preparing to nest. Many yellow-headed blackbirds seen flying over riverbottom.

In late afternoon packed up our stuff and drove down to Bard. Near the experimental on Colby's farm, several hummingbirds were seen feeding on gladiola flowers that were planted near the roadside. One taken proved to be a young Costa. All looked small and light colored so presume they were of the same species. Saw a pair of cuckoos fly past at this locality.

Drove north and west to reach the Picacho wash road. When crossing the drainage canal a black phoebe flew from her nest beneath the bridge (rather late record) and male joined her when she perched on branch over water. A pair of

Florida gallinules had 3 newly hatched chicks swimming in ditch. Saw many mockingbirds on Picacho road.

All of this section now under cultivation and could find no primitive ground to camp on. Turned back up the All American Canal road, returning to old camp at Potholes. At each concrete flood bridge over the canal great colonies of cliff swallows were nesting. Shot 3 specimens, many of them were young on the wing. Saw a sparrow hawk. Large tule swamps caused by seepage below the canal were occupied by red-winged blackbird colonies. Around these colonies many cowbirds were gathered. These parasites victimize the redwings too.

Owls came in at sundown as usual. Many Texan night hawks were flying from early evening until very late.

June 28, 1952

Shot cuckoo at crack of dawn. In fact I opened my eyes looked up into tree over my bed, picked up gun, shot bird.

The white-wings started cooing while the screech owls were still chattering this morning. This early bird singing foretells a hot day coming. Took blue grosbeak and another cuckoo before breakfast. Male Cooper tanager hunting food for young nearby.

Hunted out into the arrowood willow association again. Saw very few birds, 1 black phoebe, several ash-throated flycatchers, a kingbird (western) feeding two young on the wing, 1 Bullock oriole male, and collected 1 male blue grosbeak. Ground dove in camp about noon and later a family of 5 cactus wrens were feeding nearby. A plumbeous gnat-catcher in tree overhead.

Two skunks were about in daylight about 6 p.m. Numerous deer sign in arrowood-willow river bottom. Today one track looked like a huge buck.



San Quintin, Baja California, Mexico trip

Huey with Charles Harbison and Wesley Farmer

August 21 - August 24 1953

(incomplete, notes missing)

San Quintin, Baja Calif. Trip 1953

August 21, 1953

Left house 7:45, picked up Wesley Farmer and Harbie, arrived at border about 9:30. Mexican officials waved us on. Gassed up truck and on our way. Day overcast with slight breeze from west. Very pleasant. Arrived Ensenada about 11 a.m. after brief stop left at noon. Lots of new fire scars since last I was over the road.

Inland day was warm and everywhere the plant life seemed dry and sun scorched.

About 10 miles north of Santo Domingo rear tire blew out. Lost half an hour replacing with spare and now hope that this old tire holds. Gassed at Sto. Domingo.

On San Quintin plain saw Calif. ground squirrel. Had its burrow in center of graded highway. Seemed odd to see the g. squirrel disappear into the center of the highway!

At the tomato cannery I renewed acquaintance with a Mr. Franklin Frymeer whom I had met 2 years ago. He informed me that the ground squirrels had arrived 2 years past when a lot of the country had been planted to wheat.

We drove on over the highway and onto a narrow dirt road that passed a large cultivated area. Made camp in heavy brush, mainly fruitea about 3/4 mile east of the estero Santa Maria.

Each of us set 30 traps on soft silty soil with heavy cover of fruitea bush. Looked at them about 9:30 p.m. and reset sprung traps. 1 woodrat, 2 Perog. hilleri, 1 Peromyscus gambelli.

August 23

About 4 a.m. the fog came in but did not drop.

Traps held 2 woodrats, 1 P. hilleri, 6 Peromyscus m. gambelli and 1 Onychomys.

Harbie and Wesley walked down to the estero. I sat down to skin. 3 Mex. boys came by and 1 later brought in a horned lizard he had caught nearby.

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Harbie and Wesley walked down to the beach to scout for better collecting ground. Returning in late afternoon they reported good locality near the fresh water lagoon. We all set the rest of our traps tonight. This made 180 traps out.

August 23, 1953

Traps held several woodrats, 6 *D. merriami*, 1 *agilis* and about 25 *P. hilleri*. Harbie was lucky and caught a *Dipodomys gravipes* which is the southernmost so far. In my line a burrowing owl was caught by the foot in a mouse trap.

After getting up the least skins of the catch we packed up about 4 p.m. and moved down to the beach.

Each set about 30 traps amid tules and pickle weed near the fresh water pond. Meadow mice trails were everywhere. Swallows were abundant on the water. Rough-winged barn and cliff, a dozen pin-tailed ducks were seen about and large-billed sparrows were plentiful.

August 24

Traps caught 16 meadow mice, 14 harvest mice and 5 *Peromyscus gambeli*. Wesley caught 4 nice perch this a.m. Harbie had a grand day in and around the tule pond.

Rebaited traps again this evening.

San Felipe  
Baja California, Mexico  
Feb. 15 & 16, 1954 (incomplete)

San Felipe, Baja California, Mexico

February 15, 1954

Left San Diego 8:30 a.m. Took water for truck at Buckman Camp ground. Arrived at U.S. - Mexican line Calexico 1 p.m. Waved across without any delay. Day clear with slight west wind. Road perfect, paved to San Felipe. Stopped for lunch at El Major. White-throated swifts flying about.

San Felipe at 4 p.m. Village usual Mexican type with abundant kids and dogs so moved to place 5 miles north of the village. Camped on mesa above the beach all alone.

Set line of traps over hard semi sandy soil. Ocotillos, creosote and very few cacti growing in scattered array. Cold west wind set in at sundown which increased to almost gale strength by 9 p.m.

February 16

Dawn broke clear with cold brisk west wind still blowing.

Traps held 4 *Dipodomys m. arenivagus*

Rock wren and Say's phoebe about camp. Calif. gulls along beach.

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Topotypes

Perognathus Flat, Emigrant Gap, Panamint Mts.  
Inyo County, California (Only camp in Gap).

Vicinity of Darwin & Hd. of Emigrant  
Little narrow faced. Small colonies thickets.

Dipodomys levipes (Merriam) 8 or 9 mi high up to Westward  
(5 toed)

Perognathus longimembris panamintinus Merriam (important).

Hannopee Canyon, Panamint Mts.

Thomomys scapterus Elliottt hg. (8000 ft.+) in Mt. Pks.

Head of Willow Creek, Panamint Mt.

Dipodomys panamintinus Merriam (Little colonies Rose thickets)  
Normally large sized, 5 toed.